

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



INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION SERVICES

Due Date: 11/30/07, Time: 2:00 PM

Pre-Bid Conference: 11/09/07, Time: 10:00 AM

KATHY MADARY, C. P. M., STAFF BUYER  
PHONE: 410-887-3888  
EMAIL: [kmadary@baltimorecountymd.gov](mailto:kmadary@baltimorecountymd.gov)

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](http://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?

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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 Bureau. 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 Invitations to Bid and Requests for Proposals shall be accompanied by an executed Procurement Affidavit, as provided by the Purchasing Bureau. 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 Bureau. 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 Bureau.

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 Bureau 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 Bureau 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 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 Quotations and Invitations to 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 Invitations to 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 Bureau. 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 Business Enterprise (MBE) and Small Business Notice:** Although there is no requirement that the Contractor be an MBE, a Women-Owned Enterprise (WBE), or a Small Business, M/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 Bureau must deliver written protests to the Purchasing Bureau 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 Bureau.

**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.

**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. Requests for Proposals:** In addition to aforementioned instructions, the following apply to Requests for Proposals (RFP).

17.1 All RFP proposals submitted shall be valid for 180 days following the closing date noted, unless otherwise specified in the bid documents. This period may be extended by mutual written agreement between offerors and the County. Proposals may not be withdrawn during this period.

17.2 Modifications: The County may, at any time by written order, make changes within the general scope of a contract including, but not limited to, changes (1) in any designs or specifications; (2) in the method, quantity, or manner of performance of the work; (3) in any County-furnished facilities, equipment, materials, services, or property; or (4) directing acceleration in the performance of the work. No change, modification or revision shall be binding upon the County, unless made in writing by its authorized representatives.

17.3 Subcontracting and Assignment: All subcontracting arrangements require prior approval of the County. The Contractor shall not assign, transfer, convey, delegate, subcontract, or otherwise dispose of any award of any or all of its rights, title, or interest therein, without the prior written consent of the County, which shall not be unreasonably withheld.

### 17.4 Additional Reservations for RFP's

17.4.1 This RFP creates no obligation on the part of the County to compensate offerors for proposal preparation expenses. The County reserves the right to award a contract based upon proposals received without further negotiation and may do so; offerors should not rely upon the opportunity to alter their proposals during discussions.

17.4.2 The County reserves the right to waive minor irregularities, to negotiate in any manner necessary to best serve the public interest, and to make a whole award, multiple awards, a partial award, or no award. The County reserves the right to cancel this RFP, in whole or in part, any time before the closing date.

17.5 Confidentiality: Offerors must specifically identify any portions of their proposals deemed to contain confidential information, proprietary information or trade secrets. Those portions must be readily separable from the balance of the proposal. Such designations will not be conclusive, and offerors may be required to justify why such material should not, upon written request, be disclosed by the County under the Public Information Act, State Government Article, Title 10, Sub-Title 6, of the Annotated Code of Maryland, as amended. The County may disclose such information if required by law, court order or subpoena.

**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] \_\_\_\_\_ (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, nor any of its officers, directors, partners, members, affiliates, or any of its employees 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 641 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]:

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**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]:

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**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]:

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**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 officers, directors, partners, members, affiliates, 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. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION**

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 is a (Insert State Name) (Example: Maryland, Ohio, Iowa) (Select One: **Corporation, Partnership, Limited Liability Company, Limited Liability Partnership, Sole Proprietor**) \_\_\_\_\_, that it (Select One: **(is) (is not)**) registered in accordance with the Corporations and Associations Article of the Annotated Code of Maryland, that it (Select One: **(is) (is not)**) in good standing in the State of Maryland, and that it (Select One: **(has) (has not)**) filed all of its annual reports, together with filing fees, with the Maryland State Department of Assessments and Taxation, and that the name and address of its resident agent filed with the State Department of Assessments and Taxation is:

Name: \_\_\_\_\_  
Address: \_\_\_\_\_

(If none, so state).

(2) Except as validly contested, the Business has paid, or has arranged for payment of, all taxes due the State of Maryland and Baltimore County, and has 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 will have paid all withholding taxes due the State of Maryland prior to final settlement.

**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. NONDISCRIMINATION IN EMPLOYMENT STATEMENT**

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 a

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

I FURTHER AFFIRM THAT:

The Contractor 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. The disclosure shall be made to the Office of Budget and Finance, Purchasing Bureau.

#### M. 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)

**MINORITY PARTICIPATION AFFIDAVIT**

**A. AUTHORIZED REPRESENTATIVE**

I HEREBY AFFIRM THAT:

I am the [title] \_\_\_\_\_ and the duly authorized representative of [business] \_\_\_\_\_ (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 MINORITY PARTICIPATION**

I FURTHER AFFIRM THAT:

I am aware that, pursuant to the March 5, 2004 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.

\_\_\_\_\_ The Business is a certified MBE with

Maryland State Department of Transportation (MDOT)

City of Baltimore

Other Program: \_\_\_\_\_

\_\_\_\_\_ The Business is a certified WBE with

Maryland State Department of Transportation (MDOT)

City of Baltimore

Other Program: \_\_\_\_\_

\_\_\_\_\_ The Business is not a certified MBE or 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 percentage of ownership.

\_\_\_\_\_ The Business anticipates utilizing MBE or WBE subcontractors for \_\_\_\_\_% of the work on 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.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

(Authorized Representative and Affiant)



**SIDE 2**

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

<b>Business Ownership (Check Only One)</b>			
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

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

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

<b>Incorporation</b>	
Incorporation State: _____	OR Date Business Started ____ / ____ / ____

<b>Signature</b>		
I certify that the information shown on this registration is true and correct. I will advise the Purchasing Bureau 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.

#### 1.2 Certificate 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 a Certificate of Insurance provided by the County, or an exact replica thereof, evidencing the required coverages.

#### 1.3 Baltimore County as 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 and its agents, employees, officers, directors, and appointed and elected officials 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 - \$250,000 each accident
- Bodily Injury by Disease - \$500,000 policy limit
- Bodily Injury by Disease - \$250,000 each employee

#### 2.4 Valuable Papers and Records Coverage and Electronic Data Processing (Data and Media) Coverage

##### Minimum Limits of Coverage:

\$100,000 Per Claim and Each Occurrence  
\$100,000 in the Aggregate

#### 2.5 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  
CERTIFICATE OF INSURANCE

THIS FORM MUST BE COMPLETED BY A LEGALLY AUTHORIZED REPRESENTATIVE OF INSURANCE COMPANY OR INSURANCE AGENCY.

THE CONTRACTOR/VENDOR MUST MAINTAIN THE INSURANCE COVERAGES REQUIRED UNDER THE TERMS AND CONDITIONS OF THIS CONTRACT WHILE THIS CONTRACT IS IN EFFECT INCLUDING RENEWAL AND EXTENSION TERMS.

TO: BALTIMORE COUNTY, MARYLAND  
PURCHASING BUREAU  
400 Washington Avenue, Room 148  
Towson, Maryland 21204

Solicitation/Contract/Purchase Order No.

Name of Contractor/Vendor

THIS IS TO CERTIFY THAT:

- (1) The undersigned has received and reviewed the INSURANCE PROVISIONS of the above-numbered Solicitation/Contract/Purchase Order No.; and
- (2) The following insurance has been issued, is in force, and conveys all the rights and privileges afforded under the policy and as required under the Solicitation/Contract/Purchase Order; and

Type of Insurance	Insurance Company	Policy Numbers	Amt. Of Coverage
General Liability	_____	_____	_____
Automobile Liability	_____	_____	_____
Worker's Compensation and Employers' Liability	_____	_____	_____
Valuable Papers and Electronic Data	_____	_____	_____
Other	_____	_____	_____

- (3) General Liability, Automobile Liability and Valuable Papers and Electronic Data insurance coverage shall name Baltimore County, Maryland and its agents, employees, officers, directors, and appointed and elected officials as an additional insured.
- (4) The Worker's Compensation and Employers' Liability insurance coverage shall name Baltimore County, Maryland and its agents, employees, officers, directors, and appointed and elected officials as a certificate holder.

THE UNDERSIGNED AGREES that should any of the insurance coverages indicated above be cancelled, not renewed, or changed in such a manner as would make the coverage not in conformity with the provisions mentioned above, thirty (30) days advance written notice shall be given to BALTIMORE COUNTY, MARYLAND at the address shown above; EXCEPT IN THE CASE OF NON-RENEWAL, notice shall be given as soon as known, if that be less than thirty (30) days, but in no event, less than (10) days. This notice requirement shall be reduced to only ten (10) days in case of cancellation for non-payment of insurance premiums for the coverages certified. All notice requirements shall identify the Contractor/Vendor and the number of the Solicitation/Contract/Purchase Order No.

\_\_\_\_\_  
Name of Insurance Company or Agency

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip Code

\_\_\_\_\_  
Area Code/Telephone No.

\_\_\_\_\_  
Signature of Authorized Representative of Insurance Company or Agency

\_\_\_\_\_  
Type/Print Name

\_\_\_\_\_  
Date

This Certificate of Insurance was adopted to eliminate the uncertainty regarding different forms of such documents and to reduce clerical errors. Insurer may provide ACORD Certificates of Insurance also reflecting policy duration and amount of coverage, however, in the event of any conflict between the Certificate of Insurance form and any ACORD forms, the terms and conditions of Baltimore County's Certificate of Insurance form shall prevail.

**PERFORMANCE BOND**

Bond No. \_\_\_\_\_

Principal \_\_\_\_\_ Business Address of Principal \_\_\_\_\_

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

Surety \_\_\_\_\_  
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 attached hereto, and is required under Section 17-101 et seq. Of the Maryland State Finance and Procurement Code of the Annotated Code of Maryland to give a bond conditioned as hereinafter set forth.

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 \_\_\_\_\_ 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 attached hereto, and is required under Section 17-101 et seq. of the Maryland State Finance and Procurement Code of the Annotated Code of Maryland to give a bond conditioned as hereinafter set forth.

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)	Date of Contract
Description of Bid	Date Bond Executed
Contract No. _____	
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

In Presence of:

Witness

Witness

Title

Witness

Title

INDIVIDUAL PRINCIPAL

as to \_\_\_\_\_ (SEAL)

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

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.

**MINORITY BUSINESS ENTERPRISES PARTICIPATION**  
BALTIMORE COUNTY, MARYLAND  
OFFICE OF BUDGET AND FINANCE, PURCHASING BUREAU

**GENERAL**

**County Policy:** It is the policy of Baltimore County, Maryland that minority business enterprises and women business enterprises, shall have the maximum opportunity to participate in the performance of contracts financed in whole by County funds. A minimum goal of 12% is to be awarded, in the aggregate, to MBE firms.

**Responsibility:** The bidder agrees to ensure that minority business enterprises and female contractors as defined by the Executive Order have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole with County funds provided under this Agreement. In this regard, all bidders shall take all necessary and reasonable steps to ensure that minority business enterprises and female contractors have the maximum opportunity to compete for and perform contracts. Baltimore County, Maryland, and its bidders shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this contract.

**DEFINITIONS**

For the purpose of these requirements, the following terms apply:

**APPROVED MBE LISTINGS**

Published compilations of approved and certified minority businesses, contractors, subcontractors, material suppliers, etc.:

DIRECTORY OF MINORITY BUSINESS ENTERPRISE (MDOT),  
MINORITY BUSINESS DIRECTORY OF THE CITY OF BALTIMORE.

**BC DPW**

Baltimore County Department of Public Works.

**BC MBE OFFICER**

The Baltimore County employee who provides guidance to the County on MBE-related matters pertaining to applicable procurements.

**BUSINESS ENTERPRISE**

Any legal entity which is organized in any form other than as a joint venture (e.g., sole proprietorship, partnership, corporation, etc.) to engage in lawful commercial transactions.

**COUNTY**

Baltimore County, Maryland

**COUNTY REPRESENTATIVE**

MBE Officer or an employee of the County who deals with laws and regulations pertaining to minority business enterprises – Can be reached at (410) 887-3407 for more information regarding the MBE program.

**MINORITY BUSINESS ENTERPRISE (MBE)**

A business which is owned and controlled by one or more minority persons or one or more women as defined below:

**Minority:** An individual who is black, Hispanic, Asian American, or American Indian, regardless of race or ethnicity, pursuant to the County's Minority Business Enterprise Program guidelines.

**Women:** A female, regardless of race or ethnic background.

**Owned and controlled:** A small business which is:

A sole proprietorship legitimately owned by a individual who is a minority person;

A partnership controlled by minority persons and in which at least 51% of the ownership is held by minority persons;  
or

A corporation controlled by minority persons and in which at least 51% of the ownership and managerial control is held by minority persons pursuant to the County's Minority Business Enterprise Program guidelines.

### MBE PARTICIPATION PROGRAM

The following documents submitted by the bidder or the proposer pursuant to the bid solicitation:

- Schedule for Participation of Minority Business Enterprises;
- Minority Contractor Project Disclosure and Participation Statement;
- Minority Contractor Unavailability Certificate (if appropriate);

### MDOT

Maryland Department of Transportation.

### **BIDDER'S ACTION**

**Seeking Commitments:** The bidder will seek commitments, by subcontract or otherwise, from minority business enterprises for supplies and services, any combined value of which equals or exceeds the appropriate percent of the total value of the contract.

**Expenditures for Materials and Supplies:** A bidder may count toward its MBE goal expenditures for materials and supplies obtained from MBE suppliers and manufacturers, provided that the MBE's assume the actual and contractual responsibility for the provision of the materials and supplies.

**Information to be Supplied:** The apparent low bidder shall submit to the County, with their bid, the following information:

- a. The name of an employee designated as the bidder's liaison officer for minority affairs.
- b. A completed Schedule for Participation of Minority Business Enterprises from among those names appearing in the Approved MBE Listings.
- c. A Minority Contractor Project Disclosure and Participation Statement, completed and signed by the prime contractor and minority business enterprise for each minority business listed in the Schedule of Participation.
- d. If the proposed MBE participation does not meet the MBE contract goal, information sufficient to demonstrate that the bidder has made every effort to meet these goal will be required.

### **RECORDS AND REPORTS**

**Records to be Kept:** The bidder will keep such records as are necessary to determine compliance with its minority business enterprise utilization obligations. These records to be kept by the bidder will be designed to indicate:

- a. The actual minority and non-minority contractors, type of work being performed and actual values of work, services and procurement.
- b. Documentation of all correspondence, contacts, telephone calls, etc., to obtain services of minority business enterprises on this project.

**Quarterly Reports:** The bidder will submit reports on a quarterly basis of contracts and other business transactions executed with minority business enterprises. These reports will be submitted within the first week of the month following the end of the quarter. If the bidder cannot submit his/her report on time, he/she will notify the Representative and request additional time to submit the report. Failure of the bidder to report in a timely manner may result in a finding of noncompliance. Additional reports may be required by the County upon written request.

**Retaining Records:** All such records must be retained for 3 years following completion of the contract work and be available for inspection by the County.

## ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT

**Investigation and Notification:** Whenever the County believes the bidder or any subcontractor may not be operating in compliance with the terms of these provisions, the County Representative will conduct an investigation. If the County Representative finds the bidder or any subcontractor not in compliance with these provisions, he/she will notify such contractors in writing of such steps as will, in the judgment of the County, bring such contractor into compliance.

**Report of Noncompliance:** If the contractor fails or refuses to perform fully such steps, the Representative will make a final report of noncompliance to the County for possible imposition of one or more of the sanctions listed below:

- a. Termination of the contract;
- b. Withholding a percentage of progress payment;
- c. Referral to the Office of the County Attorney for follow-up action;
- d. Denial to the contractor or any subcontractor of the right to participate in any future contracts awarded by the County;
- e. Other action, as appropriate, within the discretion of the County.

## DETERMINATION OF BID RESPONSIVENESS

**Request for Deviation:** If the bidder is unable to procure from minority business enterprises (by subcontract or otherwise), supplies and services, any combined value of which equals the appropriate percent of the total value of the contract, he/she will request, in writing, a deviation from goal requirements. This request will be reviewed by the BC MBE Officer. To obtain such a waiver, the bidder must submit the following information:

- a. A detailed statement of the efforts made to contact and negotiate with MBE's including: (1) the dates, names, addresses and telephone numbers of MBE's who were contacted; (2) a description of the information provided to MBE's regarding the work to be performed; and (3) a detailed statement of the reasons why additional prospective agreements with MBE's were not reached.
- b. A detailed statement of the efforts made to select portions of the work proposed to be performed by MBE's in order to increase the likelihood of achieving the goals.
- c. For each MBE contacted but considered not qualified, a detailed statement of the reasons for the bidder's conclusion.
- d. For each MBE contacted, but unavailable:
  - (1) A Minority Contractor Unavailability Certificate signed by the Minority Business Enterprise, or
  - (2) A statement from the bidder that the MBE refused to give such written certification after reasonable request.

**Penalties:** The apparent low bidder's failure to perform in providing a responsive MBE Program as required may result in rejection of the bid. Award may be made to the next lowest responsive, responsible bidder, or, at the County's option, the work may be resolicited.

**Cooperation in Reviews:** The bidder will cooperate with the County Representative in any reviews of the contractor's procedures and practices with respect to MBEs which the Representative may from time to time conduct.

**Approval Required for Changes:** During the life of the contract, all plans to modify the approved MBE participation program will require the approval of the County/BC MBE Officer. This includes any changes to the items of work to be sublet or materials and services to be obtained which differ from those considered in the original MBE participation program.

**False, Misleading or Misrepresenting Information:** If the documents used to determine the status of an MBE contain false, misleading or misrepresenting information, the matter may be referred to the Office of Law for appropriate action. In addition, when directed by the County, the Contractor will terminate, without liability to the County, its contract with a disqualified MBE and promptly submit for approval; the contractor's plans for maintaining the appropriate MBE participation on the project.



**MINORITY CONTRACTOR PROJECT DISCLOSURE AND PARTICIPATION STATEMENT**  
**Baltimore County, Maryland**  
**Woman Owned and Controlled**  
 (If any item does not apply, please mark "N/A")

1. PRIME CONTRACTOR – (NAME AND COMPLETE ADDRESS)	2. SOLICITATION NUMBER:
	3. SOLICITATION TITLE:

4. MINORITY FIRM: (Check One)     Individual     Partnership     Corporation     Joint Venture

5. THE UNDERSIGNED MINORITY FIRM IS PREPARED TO PERFORM THE WORK/SERVICE HEREIN DESCRIBED IN CONNECTION WITH THE CONTRACT.

Item Number: \_\_\_\_\_ Work or Service: \_\_\_\_\_

Agreed Dollar Amount for Supplies/Service: \$ \_\_\_\_\_  
 Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

Contract Begin Date	Contract Completion Date

6. MINORITY FIRM'S SUPERVISION STAFF TO INCLUDE FOREMEN

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Cell Ph No.: \_\_\_\_\_

Title: \_\_\_\_\_

7. PERCENTAGE OF WORK PERFORMED BY OTHER THAN OWN WORK FORCE: (Include Name and Address of Company) \_\_\_\_\_ %

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

8. STATE THE TERMS OF ANY ORAL OR WRITTEN AGREEMENT(S) OR UNDERSTANDING(S) WITH NON-MINORITY PERSONS OR FIRMS RELATING TO ASSISTANCE, FINANCIAL OR OTHERWISE, TO BE PROVIDED BY SAID PERSONS OR FIRMS.

THE UNDERSIGNED MINORITY FIRM WILL ENTER INTO A CONTRACT WITH \_\_\_\_\_ (INSERT PRIME CONTRACTOR)  
 FOR THE WORK/SERVICE INDICATED ABOVE UPON THE PRIME CONTRACTOR'S EXECUTION OF A CONTRACT WITH BALTIMORE COUNTY. THE UNDERSIGNED MINORITY FIRM HAS BEEN REVIEWED AND APPROVED BY THE STATE OF MARYLAND OR THE CITY OF BALTIMORE AS A MINORITY BUSINESS ENTERPRISE AS OF \_\_\_\_\_ (Date) \_\_\_\_\_ (Certification Number)

I AGREE TO THE TERMS AND CONDITIONS STATED ABOVE

SIGNATURE – MINORITY FIRM \_\_\_\_\_

Print or Type Name of Firm \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Date \_\_\_\_\_

Federal Employer Identification Number (FEIN): \_\_\_\_\_

---

SIGNATURE – PRIME CONTRACTOR \_\_\_\_\_

Print or Type Name of Firm \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_ Date \_\_\_\_\_

Federal Employer Identification Number (FEIN): \_\_\_\_\_

**SCHEDULE FOR PARTICIPATION OF MINORITY BUSINESS ENTERPRISES**  
**Baltimore County, Maryland**  
**Minority Owned and Controlled**  
 (If any item does not apply, please mark "N/A")

1. PRIME CONTRACTOR, NAME OF FIRM, ADDRESS (No., Street, City, State, Zip) \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

2. SOLICITATION TITLE \_\_\_\_\_

3. SOLICITATION NUMBER \_\_\_\_\_

4. \$ \_\_\_\_\_  
 TOTAL CONTRACT DOLLAR AMOUNT

5. LIST THE DATA REQUESTED FOR EACH MINORITY IN FIRM, INVOLVED IN THIS CONTRACT:

a. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_  
 (Name of Firm) \_\_\_\_\_ %  
 (Address) \_\_\_\_\_  
 (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

b. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_  
 (Name of Firm) \_\_\_\_\_ %  
 (Address) \_\_\_\_\_  
 (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

c. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_  
 (Name of Firm) \_\_\_\_\_ %  
 (Address) \_\_\_\_\_  
 (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip) \_\_\_\_\_

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

6. MINORITY FIRMS TOTAL DOLLAR AMOUNT: \$ \_\_\_\_\_

MINORITY FIRMS TOTAL PERCENTAGE: \_\_\_\_\_ %

7. THIS FORM PREPARED BY: \_\_\_\_\_  
 Full Name Title Date

DO NOT WRITE BELOW THIS LINE - BC USE ONLY

APPROVED:  Yes  No

DATE: \_\_\_\_\_

\_\_\_\_\_  
 SIGNATURE - County Minority Business Enterprise Officer

**SCHEDULE FOR PARTICIPATION OF MINORITY BUSINESS ENTERPRISES**  
**Baltimore County, Maryland**  
**Woman Owned and Controlled**  
*(If any item does not apply, please mark "N/A")*

1. PRIME CONTRACTOR, NAME OF FIRM, ADDRESS (No., Street, City, State, Zip) \_\_\_\_\_ TELEPHONE NO. \_\_\_\_\_

2. SOLICITATION TITLE \_\_\_\_\_

3. SOLICITATION NUMBER \_\_\_\_\_

4. \$ \_\_\_\_\_ TOTAL CONTRACT DOLLAR AMOUNT

5. LIST THE DATA REQUESTED FOR EACH MINORITY IN FIRM, INVOLVED IN THIS CONTRACT:

a. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_ %  
 (Name of Firm)  
 \_\_\_\_\_  
 (Address)  
 \_\_\_\_\_  
 (City) (State) (Zip)

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

b. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_ %  
 (Name of Firm)  
 \_\_\_\_\_  
 (Address)  
 \_\_\_\_\_  
 (City) (State) (Zip)

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

c. MINORITY FIRM \_\_\_\_\_ Percentage of Total Contract \_\_\_\_\_ %  
 (Name of Firm)  
 \_\_\_\_\_  
 (Address)  
 \_\_\_\_\_  
 (City) (State) (Zip)

Item No. and Description of work or service to be performed: \_\_\_\_\_

Contract Begin Date \_\_\_\_\_ Contract Completion Date \_\_\_\_\_  
 Agreed Dollar Amount for Supplies/Services: \$ \_\_\_\_\_ Agreed Dollar Amount for Subcontracting: \$ \_\_\_\_\_

6. MINORITY FIRMS TOTAL DOLLAR AMOUNT: \$ \_\_\_\_\_  
 MINORITY FIRMS TOTAL PERCENTAGE: \_\_\_\_\_ %

7. THIS FORM PREPARED BY: \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
 Full Name

DO NOT WRITE BELOW THIS LINE - BC USE ONLY

APPROVED:  Yes  No  
 DATE: \_\_\_\_\_

\_\_\_\_\_  
 SIGNATURE - County Minority Business Enterprise Officer

**MINORITY CONTRACTOR UNAVAILABILITY CERTIFICATE**  
**Baltimore County, Maryland**

1. IT IS HEREBY CERTIFIED THAT THE FIRM OF \_\_\_\_\_ (Name of Firm)  
 \_\_\_\_\_ on \_\_\_\_\_  
 Street Address City State Zip Code Date

CONTACTED THE MINORITY BUSINESS ENTERPRISE \_\_\_\_\_ (Name of Minority Business)

IS SEEKING TO OBTAIN A BID  
 \_\_\_\_\_  
 Street Address City State Zip Code  
 FOR WORK/SERVICE IN RELATION TO SOLICITATION NUMBER \_\_\_\_\_

2. ITEM NUMBER AND DESCRIPTION OF WORK/SERVICE REQUESTED:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3. FORM OF BID SOUGHT:  
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, SAID MINORITY BUSINESS ENTERPRISE IS  
 EITHER UNAVAILABLE FOR THE WORK/SERVICE IN RELATION TO SOLICITATION NUMBER  
 \_\_\_\_\_ OR IS UNABLE TO PREPARE A BID FOR THE FOLLOWING REASON(S):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Name: First Middle Last Title:  
 \_\_\_\_\_  
 Street Address City State Zip Code  
 Signature \_\_\_\_\_

4. IT IS HEREBY CERTIFIED THAT THE FIRM OF \_\_\_\_\_ (Name of Minority Firm)

\_\_\_\_\_ City State Zip Code  
 Street Address  
 was offered an opportunity to bid on solicitation number \_\_\_\_\_ on \_\_\_\_\_  
 \_\_\_\_\_ (Date)

by \_\_\_\_\_ (Name) \_\_\_\_\_ (Title) \_\_\_\_\_ (Firm Name)

the above statement is a true and accurate account of why the firm of \_\_\_\_\_ (Name of Minority Firm)  
 did not submit a bid.

\_\_\_\_\_  
 Name  
 \_\_\_\_\_  
 Title

## **BID REPLY LABEL**

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

### **INVITATION TO BID**

**NO. 206398  
11/30/07, 2:00 PM  
INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION  
SERVICES**

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

**BALTIMORE COUNTY, MARYLAND  
INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION SERVICES**

**GENERAL CONDITIONS**

1. **PRICES.** Prices quoted must remain firm for the period covered by this contract, unless price escalation is herein specified. Prices quoted shall include delivery costs and charges.
  
2. **MATERIALS, WORKMANSHIP, PERMITS, LICENSES, INSPECTIONS**
  - 2.1 Bidders will be required to provide at least three (3) references (names of contact persons and phone numbers) of similar sized and scoped contracts during the past eighteen (18) months.
  - 2.2 With regard to this contract, the Chief, Bureau of Traffic Engineering (CBTE), or his 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 CBTE, or his designated representative, the Contractor will effect repairs to deficient work and/or services in accordance with a schedule jointly agreed upon.
  - 2.3 The County reserves the right to make unannounced periodic inspections of the work in progress. Contractor shall contact CBTE, or his designated representative, at least seven (7) days prior to beginning work at (410) 887-3554.
  - 2.4 Permits, licenses, and taxes shall be the responsibility of the Contractor at no additional cost to the County. **The Contractor shall be pre-qualified by the Baltimore County Department Public Works, Division of Construction Contract Administration, at least ten (10) days before the bid opening, in Category A-4 (Traffic Signalization). Applications may be obtained by contacting the Baltimore County Division of Construction Contract Administration at 410-887-4248, or picked up at 111 West Chesapeake Avenue, Room 300 B, Towson, Maryland 21204, or downloaded from the Baltimore County website at [www.baltimorecountymd.gov/agencies/publicworks/contracts/pw\\_contracts\\_prequal.html](http://www.baltimorecountymd.gov/agencies/publicworks/contracts/pw_contracts_prequal.html).**
  - 2.5 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.
  
3. **METHOD OF AWARD**
  - 3.1 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.

3.2 The reputation of the Bidder regarding adequacy of their past skillful performance of work of this type and magnitude required herein, shall be considered when making the award.

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

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

6. **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 and, in either case, an affidavit 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, but 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 remain 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.

7. **INVOICING, PROGRESS PAYMENTS, AND RETAINAGE**

7.1 Invoices must be legibly prepared showing the full description and price of work performed. Authorization to pay invoices will be given by the using agency prior to payment of invoices. Invoices must be submitted in duplicate to the Office of Budget and Finance, Disbursements Section, 400 Washington Avenue, Room 148, Towson, Maryland 21204.

7.2 Cash Discounts - Cash discount periods will be computed either from the date of delivery and acceptance of the goods ordered, or the date of receipt of correct and proper invoices prepared in accordance with terms of Baltimore County's order, whichever date is later. Under no circumstances will interest be paid.

7.3 The Contractor may submit for progress payments for work satisfactorily performed and/or goods, materials, and equipment delivered to the work site. The using agency shall authorize acceptance of any request for a progress payment prior to actual payment of the corresponding invoice. Retainage up to 10% of the value of the progress payment maybe withheld at the sole discretion of Baltimore County and paid with the succeeding progress payment or upon completion of all work associated with the job.

8. **TEMPORARY SUSPENSION OF WORK.** During the progress of any job, the Contractor may suspend work via written permission of the CBTE, or his designated representative, wholly or in part, for 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 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 CBTE, or his designated representative, twelve (12) hours in advance and shall proceed with the work only when and if authority is granted by the CBTE, or his designated representative. Any work performed without approval by the CBTE, or his designated representative, will be at the Contractor's risk, and the Contractor shall be held liable for removal of any such work.

9. **APPLICABLE GENERAL CONDITIONS AND SPECIFICATIONS.** All work performed under this contract shall be done under strict compliance with the General Conditions and Specifications, and with the "Baltimore County Standard Specifications for Construction and Materials" 2007, 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 Specifications sections are in addition to the County's standard specifications for construction. In the event of conflict between the two, the General Conditions and Specifications sections and Standard Terms and Conditions for Invitations to Bid will take precedence.

10. **INSURANCE AND COMPLAINTS**

- 10.1 The successful offeror will be required to execute a Certificate of Insurance form furnished by the County in accordance with the attached requirements. The successful offeror will have five (5) calendar days to comply with this requirement, excluding County holidays and non-work days, if applicable.
- 10.2 The Provider must maintain the insurance coverages 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.
- 10.3 Noncompliance may result in the contract being awarded to the next lowest responsive and responsible bidder.
- 10.4 The Contractor must investigate and report on any complaints that might arise in connection with the use of his/her materials and supplies. The Contractor must be prepared to furnish engineering services when requested.

11. **BONDS.** The successful bidder will be required to give both a performance and payment bond each (100) percent of the contract. The successful bidder shall have fifteen calendar days to comply with this requirement. Noncompliance may result in the contract being awarded to the next lowest responsive and responsible bidder. The cost of the bonds shall be included in the bid price. It is conditioned that the Contractor complies in all respects with the terms, conditions, and obligations of the agreement and his/her obligations thereunder including the specifications. In cases where delays are clearly not the Contractor's responsibility (such as scheduling inspections and the like), the Contractor is responsible for notifying CTBE for explanation of procedures.

12. **BID DEPOSIT REQUIREMENTS**

- 12.1 Bid deposit shall be required when indicated on bid proposal. Failure to submit such check or bond when required will nullify bid.
- 12.2 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 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.
- 12.3 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.

- 12.4 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.

13. **MINORITY AND WOMEN BUSINESS ENTERPRISE REQUIREMENTS**

- 13.1 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 Bureau with the bid.
- 13.2 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.
- 13.3 During the term of this contract, copies of payments to M/WBE subcontractors and suppliers must be submitted to Richard Lee, Minority Business Enterprise Officer, (410) 887-3407. A copy of each M/WBE invoice issued to the Contractor with a payment date indicated will be adequate verification.
- 13.4 Due to the limited opportunity for MBE/WBE participation, each bidder may request a partial or full waiver of these requirements. Any waiver request must be submitted on the "Minority Contractor Unavailability Certificate".

14. **CONTRACT APPROVAL**

- 14.1 The Baltimore County Administrative Officer must approve and sign the contract resulting from this solicitation. This process typically takes four (4) weeks from the date the successful Contractor is identified. In order to keep the procurement moving, a sample standard contract is attached for review as part of this solicitation. Exceptions, if any, to the County's standard contract must be noted in your proposal submission to be considered during evaluation of the bids or proposals. Exceptions to the County's standard contract may result in rejection of your bid or proposal.
- 14.2 Do not fill in or sign the sample contract enclosed. The County will prepare a formal contract specific to this solicitation for execution by the successful Contractor.

15. **"SAMPLE" FORM CONTRACT**

- 15.1 The County's form contract is attached as part of this solicitation. The vendor's submission of a bid response without identifying exceptions expressly acknowledges and formally evidences the vendor's acceptance of all terms and conditions of the form contract. Any and all exceptions must be submitted in writing in the vendor's bid response.
- 15.2 If the vendor 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.
- 15.3 All vendors 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.

**BALTIMORE COUNTY, MARYLAND  
INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION SERVICES**

**SPECIFICATIONS**

**1. SCOPE OF WORK - GENERAL**

- 1.1 In general, the scope of this contract shall be to furnish and install traffic control signals and devices as per the attached specifications.
- 1.2 The work to be done under this contract includes but is not limited to; the providing 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. LOCATION OF WORK AND EXISTING CONDITIONS.** The work sites are located within Baltimore County, Maryland.

**3. PRE-BID MEETING**

- 3.1 A non-mandatory pre-bid meeting will be held on Friday, November 9, 2007, at 10:00 a.m. in the Purchasing Bureau, 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.
- 3.2 Bidders are requested to contact the Buyer, Kathy Madary, at 410-887-3888 to register for the pre-bid meeting. If no bidders register, the pre-bid meeting may be cancelled without further notice to the bidders.
- 3.3 Any significant changes to the solicitation as a result of the discussions at the pre-bid meeting will be posted on the web site at: [www.baltimorecountymd.gov/purchasing](http://www.baltimorecountymd.gov/purchasing).

**4. WORK SCHEDULE, INTERRUPTIONS, PROPERTY PROTECTION**

- 4.1 All work must be performed between the hours of 7:30 a.m. and 4:30 p.m. It shall be the Contractor's responsibility to see that all tools, equipment, and materials are delivered within or adjacent to the area as specified by the County.
- 4.2 All work can be accomplished during the weekdays Monday thru Friday excluding County holidays:

New Years Day	Columbus Day
Martin Luther King, Jr. Birthday	General Election Day (even years)
President's Day	Veteran's Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day
Labor Day	

- 4.3 The work described in this specification shall be done with the least inconvenience to Baltimore County Government. Vehicles must have egress capabilities at all times. The amount of time that normal operations are interrupted must be kept to an absolute minimum and shall be coordinated with the user agency at (410) 887-3554.

- 4.4 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 CBTE or his designated representative.
- 4.5 All work being performed for and/or on Baltimore County property shall fully conform to all local, state, and Federal safety regulations.

5. **MATERIAL SUBSTITUTES AND CHANGES TO THE CONTRACT**

- 5.1 In some sections, this specification might mention specific manufacturer's materials and/or products (where situations require). However, this specification allows for approved equals for our use. Approved equals must meet or exceed the same physical and chemical properties of the named material. Approval(s) must be in writing prior to beginning work.
- 5.2 The Contractor will notify the CBTE or his 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 not covered under the original scope of work, specification or drawing(s) shall be jointly agreed upon by the Contractor and the County. Any additional cost on the project must be submitted in writing by the Contractor and an amendment to the purchase order will 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 specifications should be directed to, and will be issued by the Purchasing Agent.

6. **DEMOLITION AND DEBRIS REMOVAL.** The Contractor shall be responsible to remove all their debris from the site and clean affected work areas. Contractor shall keep the premises free of debris and unusable materials resulting from their work and as work progresses; or upon request by a Baltimore County representative, shall remove such debris and materials from County property. The Contractor shall leave all affected areas as they were prior to beginning work.
7. **UTILITIES.** Baltimore County shall make available all required utilities to the Contractor for work under this contract. This however does not include those utilities to be installed by the Contractor as a part of the scope of work or specification. Accidental interruption(s) caused by the Contractor and repair thereto, shall be at the Contractor's expense. Planned interruptions under this contract shall be coordinated with the CBTE's office at least one (1) day in advance of the expected occurrence.
8. **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 their 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.
9. **WARRANTY AND SERVICE.** Contractor must furnish with their bid proposal, names and phone numbers of persons to contact in case of warranty or service problems.

**BALTIMORE COUNTY, MARYLAND  
INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION SERVICES**

**GENERAL PROVISIONS**

**1. SCOPE OF WORK**

- 1.1 This contract is for the provision of a variety of services related to the installation and modification of traffic control signals in Baltimore County, at various locations as determined by the County. The work activities include the following types of assignments:
- 1.2 Installation of new traffic signals, major and minor modifications of existing traffic signals, interconnection of traffic signals, and installation of miscellaneous traffic control devices such as signs and luminaries that are associated with traffic signal installations or modifications. This includes work assignments to install or replace loop detectors/video cameras, either as separate independent assignments or as a part of larger assignments for signal installations.
- 1.3 It is the intention of these specifications that the vendor hereunder shall furnish and Baltimore County shall purchase traffic signal/device construction services covered by this contract which the County may require during the period of time specified. The quantities shown are approximate and are for the purpose of bid evaluation.
- 1.4 The County reserves the right to order services that may be required during the said period, and it also reserves the right not to order services bid upon by the vendor, if it is found that such services are not required by the County during the period covered by this contract.

**2. TERM OF AGREEMENT**

- 2.1 The term of this agreement shall be for one (1) year. Baltimore County reserves the right to renew this agreement for an additional ten (10) years, under the same terms and conditions. Baltimore County will automatically renew this agreement on each option year unless notice is given to the Contractor that the agreement is not renewed.
- 2.2 If the Contractor will not renew this agreement for any renewal year or if price adjustments are requested pursuant to the terms of this agreement, then Contractor must notify the Baltimore County Bureau of Traffic Engineering and Transportation Planning Design Section Chief ninety (90) days prior to the current terms expiration date.

**3. METHOD OF AWARD.**

- 3.1 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.
- 3.2 All prices offered herein shall be firm against any increase for one (1) year from the effective date of the contract. Prior to commencement of subsequent renewals terms, the County may entertain a request for escalation in accordance with the current consumer price index (CPI) at the time of the request or up to a maximum five percent (5%) increase on the current pricing, whichever is lower.

3.3 For the purposes of this section, "CPI" shall mean the "CPI-All Urban Consumers-United States Average - All Items (CPI-U)", as published by the United States Department of Labor, Bureau of Statistics.

3.4 Baltimore County reserves the right to accept or reject the request for a price increase within fourteen (14) days. If the price increase is approved, the price will remain firm from the effective date of the renewal term of this agreement

4. **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 any obligation or penalty.

5. **STANDARD SPECIFICATIONS**

5.1. Except as otherwise indicated, all work done under this contract shall conform to the Maryland Department of Transportation, State Highway Administration, "Standard Specifications for Construction and Materials" January 2007, and the State of Maryland, Department of Transportation, State Highway Administration "Book of Standards, Highway and Incidental Structures", including any subsequent revisions, addenda, amendments and/or supplements, and interpretations. Hereinafter, these documents will be referred to as the "Standard Specifications", and are hereby incorporated by reference into this contract. Additionally, the work must also conform to the Special Provisions, some of which are those of the Maryland State Highway Administration. All rights and payment therein that were assigned to the State of Maryland, shall apply to Baltimore County, Maryland. All reference to departments, bureaus, offices, agencies, or activities of the State of Maryland, shall apply instead to the similar activity of Baltimore County. In case of conflict between the Standard Specifications, and any provision of this contract, the contract shall govern. However, the Bidder or Contractor should request interpretation from the Engineer.

5.2 When the County requires a work item, and it is not covered by the Standard Specifications or by the Special Provisions, then the Contractor shall perform the work according to the most nearly comparable specifications, or according to acceptable standards and procedures of Baltimore County. Should there be any questions on which specification is applicable, the Contractor shall request an interpretation from the Engineer before executing the work.

6. **CONTRACTOR QUALIFICATIONS, EQUIPMENT AND VEHICLES.** Contractors must complete the Contractor's Prequalification Application unless they are already pre-qualified. These applications may be obtained by contacting the Baltimore County Division of Construction Contract Administration at 410-887-4248 or picked-up at 111 West Chesapeake Avenue, Room 300-B, Towson, Maryland, 21204 or obtained from the website www.baltimorecountymd.gov

Contractors shall be pre-qualified with Baltimore County Division of Construction Contract Administration in Category A-4 (Traffic Signalization) at least 10 days before the bid opening date to be able to be considered for award..

7. **EXPLANATION OF WORK**

7.1 **WORK ITEMS.** The quantities shown for all bid items are based upon the best information available at the time of bidding, and are established for the purpose of obtaining a bid price. The quantities for all items may be increased or decreased without any adjustments to the contract unit bid price, and shall not be considered as a basis for a claim by the Contractor against the Administration resulting from any quantity changes. References made in Subsection GP-4.04 of the Specifications relating to bid quantity cost adjustments shall not apply to this contract.

- 7.2 The work items and the estimated quantities thereof are as listed on the Quotation Sheets of this Contract Proposal. All items are contingent. The quantities listed are approximate and will be used to compare bids and establish fixed unit prices for this part of the contract.
- 7.3 On occasion, in order for the Contractor to fully complete a work assignment at a particular location, it may be necessary for the Contractor to undertake a construction activity that is anticipated and for which there is no specific work item listed in the contract. In such cases, the Contractor must notify the Engineer and request approval to undertake the necessary activities. Such work items will become negotiable work items and must be approved by the Engineer prior to beginning work on that work item.
- 7.4 **Implied work** should include all incidental work required by the drawings or specifications, for which no payment is specifically provided. Any work or materials not therein specified, but which are required to complete the work shall be done or furnished by the Contractor without extra compensation. The work or materials may fairly be implied as included in this contract or may be judged by the Engineer as included in this contract.
- 7.5 The Contractor shall obtain written permission from the Engineer prior to making any changes in operational functions, systemization, phasing or timing of any traffic signal.
- 7.6 The Engineer shall clarify any doubt as to the meaning or obscurity as to the wording of the specifications in this contract or the intent of the plans. The Engineer shall explain or make definite any of the provisions of the Specifications, Contract, or Plans. All decisions of the Engineer will be final.

## 8. DEFINITIONS OF WORK ITEM TERMS

- 8.1 The term "**INSTALL**" shall mean installation by the Contractor of materials supplied by the County and/or Maryland State Highway Administration (MSHA). The Contractor shall pick up County supplied materials at the Baltimore County Traffic Signal Shop, 12200 C, Long Green Pike, Glen Arm, Maryland 21057. The Contractor shall first contact the Signal Shop Supervisor (410-887-8601) 48 hours in advance to arrange for pickup of County supplied materials. The Contractor shall pick up the MSHA-supplied materials at the State Highway Administration, Office of Traffic and Safety, Signal Warehouse, 7941 Connelley Drive, Hanover, Maryland 21076. Before pickup of MSHA supplied materials, the Contractor shall first contact the Signal Operations Warehouse (410-787-7668) 48 hours in advance to arrange for pickup of MSHA supplied materials. **ALL REQUESTS FOR TRAFFIC SIGNAL CABINETS must be made a minimum of three (3) weeks prior to pickup for SHA or County supplied traffic signal cabinets.** Any Contractor-supplied materials that may be necessary to complete an "INSTALL" item shall be incidental and included in the price bid. The Contractor shall be responsible for all transportation and other costs associated with the pickup of County or MSHA-supplied materials.
- 8.2 The term "**REMOVE**" or "**REMOVAL**" shall mean complete disassembly and removal from the job site to a **legal** dumping facility. Concrete foundations for existing poles, cabinets, and pedestals shall be removed to a minimum of twelve inches below grade and holes created by such removal shall be backfilled and compacted to the Engineer's satisfaction. Payment for removal of the foundation as described above shall be incidental to removal of the pole, cabinet, etc.
- 8.3 The term "**REMOVE AND SALVAGE**" shall mean the careful disassembly of the item, tagging of the item as to location from which it was removed, and return to the County in the same condition as it existed in the field. Twenty-four (24) hour notice shall be given to the Signal Shop Supervisor prior to delivery of salvaged equipment. At their discretion, the

Engineer may specify that a "REMOVE AND SALVAGE" item be disposed of by the Contractor, instead of returning it to the County.

- 8.4 The term "RELOCATE" shall mean the removal of the items from its existing location and re-installation at a new location as directed by the Engineer.
- 8.5 Any work item not preceded by the term "INSTALL" "REMOVE", "REMOVAL", "REMOVAL AND SALVAGE", or "RELOCATE", shall mean "FURNISH AND INSTALL". This shall include all material, equipment, labor, bolts, nuts, reinforcing, and any miscellaneous hardware, to complete the item and make it fully operational and functional.

## 9. WORK ASSIGNMENT PROCEDURE

9.1 Specific work locations are not listed in this Contract Proposal but will be assigned as necessary by the Engineer during the term of the contract. Whenever a work assignment is to be made, the Engineer will issue a notice to proceed letter to the Contractor. The notice to proceed letter will describe the work assignment to the Contractor and the priority of the work assignment. It may include any necessary drawings or sketches, or additional information needed to fully identify the location, extent, and type of work to be done. An itemized list of estimated work items and quantities may be provided with the work order; but this list is for guidance only and shall be considered preliminary in nature.

9.2 The Contractor shall notify the Signal Shop Supervisor or his designated representative at (410) 887-8601 by 8:00 a.m. each day that the Contractor is to perform any work on each assignment. Any work performed without this notification shall be considered as unauthorized work as specified in Section GP-4.08 of the Contract Document. The Engineer shall charge working days as specified in the contract document to each work assignment if all conditions for time charges are met, including days when the above notification has not been given by the Contractor.

10. PRIORITIES OF WORK: Bonuses And Liquidated Damages. The contract shall provide for four (4) levels of priority of work assignments. These priorities shall be identified as "NORMAL WORK", "ACCELERATED WORK", "CRITICAL WORK", and "EMERGENCY WORK". Each priority of work may require night work and will be compensated as specified below.

10.1 **NORMAL WORK** will comprise the bulk of the assignments assigned. This work will be paid for at the contract unit bid prices established on the Quotation Sheets in this Contract Proposal. Normal Work shall be completed within Forty (40) calendar days following receipt of the notice to proceed letter. Liquidated damages for failure to complete normal work within forty (40) calendar days shall be assessed at one percent (1%) per day.

10.1.1 If **NORMAL WORK** is required to be done at night, then **NORMAL WORK (at night)** shall be paid for at a rate that is 110 percent (110%) of the contract unit bid prices established on the Quotation Sheets in this Contract Proposal. Normal Work (at night) shall be completed within Forty (40) calendar days following receipt of the notice to proceed letter. Liquidated damages for failure to complete normal work (at night) within forty (40) calendar days shall be assessed at three percent (3%) per day.

10.2 **ACCELERATED WORK** is work that the County requires to be completed by the Contractor within fifteen (15) calendar days following receipt of the notice to proceed letter. Notice to proceed for Accelerated Work may be given to the Contractor verbally by the Engineer, followed by a subsequent confirming written notice to proceed letter. The fifteen (15) day time period shall be measured starting with the verbal notice to proceed. Accelerated Work

completed within the fifteen (15) calendar day time period shall be paid for at a rate that is **110 percent** (110%) of the contract unit bid prices established on the Quotation Sheets in this Contract Proposal. Accelerated Work that the Contractor fails to complete within the fifteen (15) calendar day time period shall be paid for at the contract unit bid prices (i.e., loss of bonus) and shall also be subject to liquidated damages of **three percent** (3%) per calendar day.

10.2.1 If night work is required for accelerated work, no additional compensation will be given.

10.3 **CRITICAL WORK** is work that the County requires to be completed by the Contractor within **seven (7) calendar days** following receipt of the notice to proceed letter. Notice to proceed for Critical Work may be given to the Contractor verbally by the Engineer, followed by a subsequent confirming written notice to proceed. The seven (7) day time period shall be measured starting with the verbal notice to proceed. Critical Work completed within the seven (7) calendar day time period shall be paid for at a rate that is **125 percent** (125%) of the contract unit bid prices established on the Quotation Sheets in this Contract Proposal. Critical Work that the Contractor fails to complete within the seven (7) day time period shall be paid for at the contract unit bid prices (i.e., loss of bonus) and shall also be subject to liquidated damages of **five percent** (5%) per calendar day.

10.3.1 If night work is required for critical work, no additional compensation will be given.

10.4 **EMERGENCY WORK** is work that the County requires to be completed by the Contractor within **twenty-four (24) hours** following receipt of a verbal notice to proceed. The verbal notice to proceed will be followed by a subsequent confirming written notice to proceed letter. Emergency Work completed within the twenty-four (24) hour time period shall be paid for at a rate that is **150 percent** of the contract unit bid prices established on the Quotation Sheets in this Contract Proposal. Emergency Work that the Contractor fails to complete in the twenty-four (24) hour time period shall be paid for at the contract unit bid prices (i.e., loss of bonus) and shall be subject to liquidated damages of **ten percent** (10%) per calendar day.

10.4.1 If night work is required for emergency work, no additional compensation will be given.

## 11. MINIMUM QUANTITIES OF WORK TO BE ASSIGNED AND ACCEPTED

11.1 The County anticipates, but does not guarantee, a requirement of approximately **15 major projects** per twelve (12) month period. The major projects would include new traffic signal installations, existing traffic signal rebuilds, large interconnect projects, or modifications to existing traffic signals. In addition to the major projects, a variety of minor work assignments may also be assigned, including work assignments for installing or replacing 20 loop detectors and/or video cameras at various locations and various minor streetlighting repair work assignments.

11.2 The Contractor shall have the capacity (work force and equipment) and be required to accept and complete work assignments for the following quantities of work in accordance with the schedules set forth in Section 10, Priorities of Work above, if the County issues such work assignments:

11.2.1 Major Projects - "Normal" work: Min. 1 per month.

11.2.2 Minor Projects - "Normal" work: Min. 1 per month.

11.2.3 "Accelerated" Work Assignments (15 day completion): Min. 1 per month.

11.2.4 "Critical" Work Assignments (7 day completion): Min. 1 per month.

11.2.5 "Emergency" Work Assignments (24 hour completion): Min. 1 per month.

11.3 For work assignments the County may desire to assign that are more than these quantities, the Contractor may or may not accept the work assignment with the schedules for completion set forth in Section 10, Priorities of Work. If the Contractor does not accept such work assignment, the Contractor and the County shall confer regarding the Contractor's backlog of work assignments under this contract and other contracts. However, if both the Contractor and the County mutually agree to a revised time schedule for completion of the work assignment before liquidated damages will apply, then the agreed revised time schedule for completion shall be noted on the work assignment, which the Contractor shall then be required to accept. Work Assignments made under this procedure shall all be considered "Normal" work for the purposes of applicable unit prices and rates of liquidated damages. In cases where the Contractor's scheduling is such that it is determined (after conference with the County) that the quantity or scheduling of assignments desired by the County cannot be accommodated, the County reserves the right to contract with other parties for similar work.

12. **AVAILABILITY OF SERVICES.** The services of the Contractor are required to be available 24 hours per day, 7 days per week, without exception, so as to provide the capability of responding promptly to traffic signal work needs that may be caused by accidents or natural disasters. The Contractor shall have a designated contact person who shall be available by phone or pager 24 hours a day, 7 days per week. A list of contacts and phone numbers shall be provided to the Engineer within two weeks after the notice to proceed. The Contact list is to be kept current and any updates supplied to the Engineer, Signal Shop, and the Inspector.

13. **SHUTDOWN STATUS.** When weather conditions are such that, in the opinion of the Engineer, work cannot be prosecuted on a work assignment given under this contract, that assignment may be placed in "shutdown status" by the Engineer. The time to complete an assignment, expressed in calendar days shall be extended by the number of calendar days that the assignment is in shutdown status. The determinations of the Engineer regarding shutdowns shall be binding and conclusive to both parties to this contract.

14. **PAYMENT**

14.1 **INSPECTION AND ACCEPTANCE**

14.1.1 The Contractor shall perform all work to a high degree of workmanship. Items such as improperly set couplings, unreamed conduit ends, or any other contract items that are not up to the standard specifically required by the contract shall be removed and replaced at no cost to the County.

14.1.2 During the final inspection of each unit of work, the burden of proof that the concealed work is up to the required standard is upon the Contractor. Should this proof not be acceptable to the County, then the Contractor may be required to do whatever is necessary, including exposing the concealed work, to clearly establish that the concealed work meets the specifications, at no cost to the County.

14.1.3 Upon completion of the work assignment at a specific location, the Contractor shall notify the Engineer and arrange for a semi-final inspection so that acceptance of the

work assignment may begin by starting of the test period. Following the semi-final inspection, measurement, and acceptance by the Engineer, the Contractor shall submit an invoice itemized by contract item used which reflects the quantities of the work actually performed, measured, and accepted for that work assignment. The invoice shall be accompanied by three (3) sets of drawings and diskette showing the "as-built" conditions (see Special Provision Section 856 – As-Built for Traffic Signal).

15. **DAMAGE TO PROPERTY**. Any direct or indirect damage that is done to public or private property by or because of the work of the Contractor, or in consequence of any act or omission on the part of the Contractor, his employees or agents, the Contractor shall, at his own cost, restore such property to a condition similar or equal to that existing before such damage was done. By repairing, rebuilding, or otherwise restoring, as may be required by the Engineer, the Contractor shall make sure such damage has been completed in a satisfactory manner. If failure on the part of the Contractor to promptly restore or make sure such damage has been completed in a satisfactory manner, the Engineer may, after 48 hours written notice to the Contractor, proceed to repair, rebuild, or otherwise restore such property as may be necessary. The cost thereof will be deducted from any monies due or to become due the Contractor under the contract. The Chief Administration Officer may deduct from any monies due the Contractor a sum sufficient, in the judgement of the Engineer, to reimburse the owners of the property so damaged.
16. **RETAINAGE AND GUARANTY**
- 16.1 **Retainage** - Out of the amount representing the total amount due upon completion of a work assignment, the Engineer, at his discretion, may deduct five percent (5 %), and may hold such sum for a guarantee period of not less than thirty (30) days. The guarantee period shall commence on the date of acceptance of the project by the Engineer. Invoices received and/or authorized for payment after the end of the guarantee period shall not have the five percent (5 %) retainage deducted.
- 16.2 **Guaranty** - The Contractor shall keep in good order and repair for a period of thirty (30) days from the date of completion of the work assignment, all work done under the contract. If in the judgement of the Engineer, repairs or renewals become necessary, the Contractor shall promptly make repairs. Any soft, inferior or defective work replaced or repaired by good and acceptable materials necessary to put the improvement in first class condition. If the Contractor does not complete these repairs, within ten (10) days after written notification from the Engineer, and signify his intention in writing to do such necessary work as stipulated above, then the Engineer may proceed to have others correct the work. The County will then deduct all costs incurred by the County to correct the substandard work or repair work completed, as herein before provided. A new thirty (30) day test period shall begin from the date the substandard work or repair work was corrected.
17. **FINAL ACCEPTANCE AND PAYMENT**. Upon expiration of the aforesaid period of thirty (30) days succeeding the final acceptance, the County will pay to the Contractor any and all sums reserved or retained, less such amount as the County may be empowered under the provisions of the contract to permanently retain.
18. **INVOICES**
- 18.1 All Contract Unit Priced Items will be calculated as follows:

18.1.1 **Quantity** (as measured on the IDR\*) X **Contract Unit Price**

\* IDR – Inspector Daily Report

BALTIMORE COUNTY, MARYLAND  
INVITATION TO BID NO. 206398  
TRAFFIC SIGNAL CONSTRUCTION SERVICES  
Due Date: 11/30/07, Time: 2:00 P.M.

BID/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 INVITATION TO BID / REQUEST FOR PROPOSAL.

COMPANY NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_ (City) \_\_\_\_\_ (State) \_\_\_\_\_ (Zip Code)

TELEPHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_

TAX ID NUMBER (FIN/SS#) \_\_\_\_\_ EMAIL: \_\_\_\_\_

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>.

**PRICE SHEET**

**INVITATION TO BID**

NUMBER : 206398  
 OPEN DATE : 11/30/07  
 T-NUMBER :  
 TIME : 2:00 PM

VENDOR:

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00001	UNLESS SPECIFIED ELSEWHERE SHIP TO: PW-TRAF ENG, TRANS PLAN PW-TRAF ENG, TRANS PLAN ROOM 326 111 W CHESAPEAKE AVENUE TOWSON, MD 21204  COMMODITY CODE: 968-82-020218 MAINTENANCE OF TRAFFIC ASSIGNMENT, MINOR, FIXED PRICE, FOR ALL ROADWAYS IN THE COUNTY NOT CLASSIFIED AS AN ARTERIAL ROADWAY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH	\$500.00	\$7,500.00
00002	COMMODITY CODE: 968-82-038206 MAINTENANCE OF TRAFFIC ASSIGNMENT, MAJOR, FIXED PRICE, FOR ALL ROADWAYS IN THE COUNTY CLASSIFIED AS AN ARTERIAL ROADWAY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH	\$1,000.00	\$15,000.00
00003	COMMODITY CODE: 968-82-020219 EXCAVATION, TEST PIT, OUTSIDE ROADWAY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	CU YD		
00004	COMMODITY CODE: 968-82-038207 EXCAVATION, TEST PIT, IN ROADWAY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	CU YD		
00005	COMMODITY CODE: 968-82-020222 EXCAVATION, CLASS 2	20	CU YD		
00006	COMMODITY CODE: 968-82-038208 MEDIAN, CONCRETE, MONOLITHIC, LESS THAN 4 FEET WIDE, REMOVE EXISTING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	LF		
00007	COMMODITY CODE: 968-82-038209 CURB AND GUTTER, REMOVE EXISTING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00008	COMMODITY CODE: 968-82-038210 SIDEWALK, REMOVE EXISTING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	400	SQ FT		
00009	COMMODITY CODE: 968-82-038211 DIKE, STRAW BALE, FOR SEDIMENT CONTROL, TRAFFIC SIGNAL CONSTRUCTION, AS PER	25	LF		

PRICE SHEET		INVITATION TO BID			
NUMBER : 206398 OPEN DATE: 11/30/07 T-NUMBER :		TIME: 2:00 PM VENDOR:			PAGE 2
LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00010	<b>SPECIFICATIONS</b> COMMODITY CODE: 988-15-018126 FENCE, SUPER SILT, DETAIL 33, OPTION B, FURNISH AND INSTALL, AS PER SPECIFICATIONS	100	LF		
00011	COMMODITY CODE: 968-82-019802 FURNISH AND INSTALL 24" THERMOPLASTIC PAVEMENT MARKING TAPE (WHITE)	1000	LF		
00012	COMMODITY CODE: 968-82-019803 FURNISH AND INSTALL 12" THERMOPLASTIC PAVEMENT MARKING TAPE (WHITE)	1000	LF		
00013	COMMODITY CODE: 968-82-038212 FURNISH AND INSTALL 5" THERMOPLASTIC PAVEMENT MARKING TAPE (WHITE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00014	COMMODITY CODE: 968-82-038213 FURNISH AND INSTALL 5" THERMOPLASTIC PAVEMENT MARKING TAPE (YELLOW), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00015	COMMODITY CODE: 968-82-019801 FURNISH AND INSTALL PAVEMENT MARKING TAPE - LETTER OR NUMBER, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	30	EACH		
00016	COMMODITY CODE: 968-82-019800 FURNISH AND INSTALL PAVEMENT MARKING TAPE - ARROW OR SYMBOL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00017	COMMODITY CODE: 968-82-038214 FURNISH AND INSTALL 12" REMOVABLE PAVEMENT MARKING TAPE (WHITE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00018	COMMODITY CODE: 968-82-038215 FURNISH AND INSTALL 4" REMOVABLE PAVEMENT MARKING TAPE (WHITE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00019	COMMODITY CODE: 968-82-038216 FURNISH AND INSTALL 4" REMOVABLE PAVEMENT MARKING TAPE (YELLOW),	1000	LF		

**PRICE SHEET**

**INVITATION TO BID**

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00020	TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS  COMMODITY CODE: 968-82-038217 FURNISH AND INSTALL 5" LATEX PAVEMENT MARKING (WHITE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00021	COMMODITY CODE: 968-82-038218 FURNISH AND INSTALL 5" LATEX PAVEMENT MARKING (YELLOW), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5000	LF		
00022	COMMODITY CODE: 968-82-019806 REMOVE EXISTING PAVEMENT MARKING (ANY TYPE OR WIDTH)	2000	LF		
00023	COMMODITY CODE: 968-82-019807 REMOVE EXISTING PAVEMENT MARKING TAPE ANY TYPE ARROW, ANY LETTER, NUMBER, OR SYMBOL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	25	EACH		
00024	COMMODITY CODE: 968-82-038219 MONOLITHIC CONCRETE MEDIAN, 4' WIDTH, MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00025	COMMODITY CODE: 968-82-038220 CURB AND GUTTER, SHA STANDARD TYPE A, 12" X 8", MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00026	COMMODITY CODE: 968-82-038221 CURB AND GUTTER, MOUNTABLE, MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	25	LF		
00027	COMMODITY CODE: 968-82-038222 FURNISH AND INSTALL DEPRESSED CURB AND GUTTER FOR HANDICAP RAMP, MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	400	LF		
00028	COMMODITY CODE: 968-82-038223 7" CONCRETE PAVING FOR SIDEWALK, MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	800	SQ FT		
00029	COMMODITY CODE: 968-82-038224 FURNISH AND INSTALL CONCRETE SIDEWALK FOR HANDICAP RAMP, MIX NO. 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	800	SQ FT		

PRICE SHEET		INVITATION TO BID			
NUMBER : 206398 OPEN DATE : 11/30/07 T-NUMBER :		TIME : 2:00 PM VENDOR :			PAGE 4
LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
	<b>SPECIFICATIONS</b>				
00030	COMMODITY CODE: 968-82-038225 FURNISH AND INSTALL DETECTABLE WARNING SURFACES, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	500	SQ FT		
00031	COMMODITY CODE: 968-82-019526 FURNISH AND INSTALL 12 INCH X 40 FOOT WOOD POLE WITH BACK GUY	4	EACH		
00032	COMMODITY CODE: 968-82-019527 FURNISH AND INSTALL BACK GUY	6	EACH		
00033	COMMODITY CODE: 968-82-019528 ADJUST BACK GUY	4	EACH		
00034	COMMODITY CODE: 968-82-038226 REMOVE EXISTING BACK GUY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00035	COMMODITY CODE: 968-82-019828 REMOVE AND SALVAGE OF WOOD POLE	2	EACH		
00036	COMMODITY CODE: 968-82-019538 FURNISH AND INSTALL CONCRETE FOUNDATION, MIX NO. 6	250	CU YD		
00037	COMMODITY CODE: 968-82-038227 FURNISH AND INSTALL MAST ARM POLE AND 38' MAST ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00038	COMMODITY CODE: 968-82-038228 FURNISH AND INSTALL MAST ARM POLE AND 50' MAST ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00039	COMMODITY CODE: 968-82-038229 FURNISH AND INSTALL MAST ARM POLE AND 60' MAST ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00040	COMMODITY CODE: 968-82-038230 FURNISH AND INSTALL MAST ARM POLE AND 70' MAST ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00041	COMMODITY CODE: 968-82-038231 FURNISH AND INSTALL MAST ARM POLE AND	4	EACH		

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00042	TWIN 38'/38' MAST ARMS, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS  COMMODITY CODE: 968-82-038232 FURNISH AND INSTALL MAST ARM POLE AND TWIN 50'/50' MAST ARMS, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00043	COMMODITY CODE: 968-82-038233 FURNISH AND INSTALL MAST ARM POLE AND TWIN 50'/60' OR 60'/50' MAST ARMS, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00044	COMMODITY CODE: 968-82-038234 FURNISH AND INSTALL MAST ARM POLE AND TWIN 50'/70' OR 70'/50' MAST ARMS, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00045	COMMODITY CODE: 968-82-019516 INSTALL STEEL POLE AND SINGLE MAST ARM, ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00046	COMMODITY CODE: 968-82-038235 FURNISH AND INSTALL STRAIN POLE, 12' X 30', (0 GAUGE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12	EACH		
00047	COMMODITY CODE: 968-82-038236 FURNISH AND INSTALL STRAIN POLE, 12" X 32", (0+0 GAUGE), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00048	COMMODITY CODE: 968-82-019510 INSTALL STRAIN POLE, ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00049	COMMODITY CODE: 968-82-038237 ADJUSTMENT, MODIFIED MAST ARM (PER MAST ARM), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00050	COMMODITY CODE: 968-82-038238 FURNISH AND INSTALL T-BASE FOR TRAFFIC SIGNAL PEDESTAL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00051	COMMODITY CODE: 968-82-038240 FURNISH AND INSTALL, PEDESTRIAN PUSH BUTTON AND SIGN, TRAFFIC SIGNAL	40	EACH		

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00052	CONSTRUCTION, AS PER SPECIFICATIONS  COMMODITY CODE: 968-82-019749 INSTALL PEDESTRIAN PUSHBUTTON AND SIGN, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00053	COMMODITY CODE: 968-82-019504 FURNISH AND INSTALL BREAKAWAY PEDESTAL POLE, ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12	EACH		
00054	COMMODITY CODE: 968-82-038242 FURNISH AND INSTALL PEDESTRIAN PUSHBUTTON POLE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00055	COMMODITY CODE: 968-82-019535 CUT, CLEAN, AND CAP TRAFFIC SIGNAL STRUCTURE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00056	COMMODITY CODE: 968-82-038243 PAINT GALVANIZED STRUCTURE, ANY TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00057	COMMODITY CODE: 968-82-038244 FURNISH AND INSTALL GROUND ROD, 3/4" DIAMETER X ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	120	EACH		
00058	COMMODITY CODE: 968-82-019511 CLEAN AND PAINT EXISTING STEEL STRAIN POLE, ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00059	COMMODITY CODE: 968-82-019536 FURNISH AND INSTALL 3/4 INCH TO 3 INCH BLIND COUPLING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	8	EACH		
00060	COMMODITY CODE: 968-82-020235 FURNISH AND INSTALL CONDUIT BEND, ANY SIZE, IN EXISTING BASE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00061	COMMODITY CODE: 968-82-038245 FURNISH AND INSTALL 1-1/4" WEATHERHEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		

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00062	COMMODITY CODE: 968-82-019672 FURNISH AND INSTALL 2" WEATHERHEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00063	COMMODITY CODE: 968-82-019673 FURNISH AND INSTALL 3" WEATHERHEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	30	EACH		
00064	COMMODITY CODE: 968-82-038246 FURNISH AND INSTALL 1/2" EMT CONDUIT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	LF		
00065	COMMODITY CODE: 968-82-038247 FURNISH AND INSTALL 3/4" EMT CONDUIT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	LF		
00066	COMMODITY CODE: 968-82-038248 FURNISH AND INSTALL 1" EMT CONDUIT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	LF		
00067	COMMODITY CODE: 968-82-019697 FURNISH AND INSTALL 1" GALVANIZED STEEL ELECTRICAL CONDUIT (DETECTOR WIRE) SLEEVE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00068	COMMODITY CODE: 968-82-019698 FURNISH AND INSTALL 1" LIQUID TIGHT FLEXIBLE NON-METALLIC ELECTRICAL CONDUIT, DETECTOR WIRE SLEEVE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00069	COMMODITY CODE: 968-82-019675 FURNISH AND INSTALL 2" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00070	COMMODITY CODE: 968-82-019676 FURNISH AND INSTALL 2" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - SLOTTED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00071	COMMODITY CODE: 968-82-019677 FURNISH AND INSTALL 2" PVC ELECTRICAL CONDUIT OR BORE DUCT, (SCHEDULE 80), TRAFFIC SIGNAL INSTALLATION, AS PER	100	LF		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00072	SPECIFICATIONS  COMMODITY CODE: 968-82-019683 FURNISH AND INSTALL 3" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	250	LF		
00073	COMMODITY CODE: 968-82-019685 FURNISH AND INSTALL 3" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - SLOTTED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00074	COMMODITY CODE: 968-82-019684 FURNISH AND INSTALL 3" PVC ELECTRICAL CONDUIT OR BORE DUCT (SCHEDULE 80), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	LF		
00075	COMMODITY CODE: 968-82-019687 FURNISH AND INSTALL 4" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - TRENCHED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	250	LF		
00076	COMMODITY CODE: 968-82-019688 FURNISH AND INSTALL 4" PVC ELECTRICAL CONDUIT (SCHEDULE 80) - SLOTTED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	500	LF		
00077	COMMODITY CODE: 968-82-019689 FURNISH AND INSTALL 4" PVC ELECTRICAL CONDUIT OR BORE DUCT (SCHEDULE 80), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	500	LF		
00078	COMMODITY CODE: 968-82-038249 FURNISH AND INSTALL ELECTRICAL JUNCTION BOX, ANY SIZE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00079	COMMODITY CODE: 968-82-038250 INSTALL BALTIMORE COUNTY HANDBOX (INCLUDES CONCRETE COLLAR), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	20	EACH		
00080	COMMODITY CODE: 968-82-019704 FURNISH AND INSTALL TRAFFIC SIGNAL HANDBOX (PULLBOX), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	60	EACH		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00081	COMMODITY CODE: 968-82-019705 ADJUST EXISTING TRAFFIC SIGNAL HANDBOX (PULLBOX), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00082	COMMODITY CODE: 968-82-038254 FURNISH AND INSTALL CONCRETE COLLAR ON EXISTING HANDBOX, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	25	SQ FT		
00083	COMMODITY CODE: 968-82-038255 FURNISH AND INSTALL 1-1/4" GALVANIZED ELECTRICAL CONDUIT (RISER), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00084	COMMODITY CODE: 968-82-019667 FURNISH AND INSTALL 3" ELECTRICAL CONDUIT, PVC, SCHED 80, (RISER), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	120	LF		
00085	COMMODITY CODE: 968-82-038256 FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQ. (120/240 V, 1-PHASE, 3-WIRE SYSTEM), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00086	COMMODITY CODE: 968-82-038257 FURNISH AND INSTALL 12 PAIR INTERCONNECT CABLE, OVERHEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	500	LF		
00087	COMMODITY CODE: 968-82-038258 FURNISH AND INSTALL 6 PAIR INTERCONNECT CABLE, UNDERGROUND, TRAFFIC SIGNAL INSTALLATION, AS PER SPECIFICATIONS	500	LF		
00088	COMMODITY CODE: 968-82-019744 FURNISH AND INSTALL SAW CUT FOR SIGNAL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00089	COMMODITY CODE: 968-82-019743 FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2500	LF		
00090	COMMODITY CODE: 968-82-019752 FURNISH AND INSTALL MICROLOOP PROBE SET, 500' LEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00091	COMMODITY CODE: 968-82-038259 FURNISH AND INSTALL MICROLOOP PROBE SET, 1000' LEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00092	COMMODITY CODE: 968-82-038276 DISCONNECT, PULL BACK, AND REROUTE CABLES, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2500	LF		
00093	COMMODITY CODE: 968-82-038253 INSTALL VIDEO DETECTION CAMERA AND HOUSING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	EACH		
00094	COMMODITY CODE: 968-82-038252 INSTALL VIDEO DETECTION CABLING, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12000	LF		
00095	COMMODITY CODE: 968-82-019699 FURNISH AND INSTALL CONNECTOR KIT - TYPE 1, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12	EACH		
00096	COMMODITY CODE: 968-82-019700 FURNISH AND INSTALL CONNECTOR KIT - TYPE 2, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12	EACH		
00097	COMMODITY CODE: 968-82-038260 FURNISH AND INSTALL 1-CONDUCTOR ELECTRICAL CABLE THHN (NO. 14 A.W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2500	LF		
00098	COMMODITY CODE: 968-82-038261 FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), ALUMINUM SHIELDED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2500	LF		
00099	COMMODITY CODE: 968-82-038262 FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), TRAY WIRE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	3000	LF		
00100	COMMODITY CODE: 968-82-038263 FURNISH AND INSTALL 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	3000	LF		

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00101	COMMODITY CODE: 968-82-038264 FURNISH AND INSTALL 3-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4000	LF		
00102	COMMODITY CODE: 968-82-038265 FURNISH AND INSTALL 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	6000	LF		
00103	COMMODITY CODE: 968-82-038266 FURNISH AND INSTALL 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	6000	LF		
00104	COMMODITY CODE: 968-82-038267 FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 W.G.), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1500	LF		
00105	COMMODITY CODE: 968-82-019756 INSTALL CONTROLLER AND CABINET - POLE MOUNT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00106	COMMODITY CODE: 968-82-019757 INSTALL CONTROLLER AND CABINET - BASE MOUNT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00107	COMMODITY CODE: 968-82-019758 INSTALL TWO CIRCUIT FLASHER CABINET - POLE MOUNT, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00108	COMMODITY CODE: 968-82-038268 FURNISH AND INSTALL 12" SIGNAL HEAD, 3 SECTION, (NOT OPTICALLY PROGRAMMED), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	500	EACH		
00109	COMMODITY CODE: 968-82-038269 FURNISH AND INSTALL 8" SIGNAL HEAD, 3 SECTION, (NOT OPTICALLY PROGRAMMED), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	80	EACH		
00110	COMMODITY CODE: 968-82-038270 FURNISH AND INSTALL 12" ONE-PIECE PEDESTRIAN SIGNAL HEAD, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	EACH		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00111	COMMODITY CODE: 968-82-038271 FURNISH AND INSTALL 12" OPTICALLY PROGRAMMED SIGNAL HEAD, 3 SECTION, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00112	COMMODITY CODE: 968-82-038251 INSTALL SIGNAL HEAD, ANY TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	50	EACH		
00113	COMMODITY CODE: 968-82-019827 REMOVE AND SALVAGE OF SIGNAL HEAD, ANY TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	16	EACH		
00114	COMMODITY CODE: 968-82-019644 RELOCATE ANY SIGNAL HEAD (INCLUDING AIMING AND ADJUSTING), TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	12	EACH		
00115	COMMODITY CODE: 968-82-019747 FURNISH AND INSTALL STEEL SPAN WIRE, 3/8", TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1500	LF		
00116	COMMODITY CODE: 968-82-019746 FURNISH AND INSTALL STEEL SPAN WIRE, 1/4", TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	1000	LF		
00117	COMMODITY CODE: 968-82-038272 FURNISH AND INSTALL GALVANIZED STEEL POST, 10' UNISTRUT POST WITH BASE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	24	EACH		
00118	COMMODITY CODE: 968-82-019787 INSTALL OVERHEAD SHEET ALUMINUM SIGN COUNTY-SUPPLIED HARDWARE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	400	SQ FT		
00119	COMMODITY CODE: 968-82-019788 INSTALL GROUND MOUNTED SHEET ALUMINUM SIGN, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	400	SQ FT		
00120	COMMODITY CODE: 968-82-019796 RELOCATE EXISTING SIGN, ANY SIZE AND/OR TYPE, TRAFFIC SIGNAL CONSTRUCTION AS PER SPECIFICATIONS	12	SQ FT		
00121	COMMODITY CODE: 968-82-019792	6	EACH		

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00122	REMOVE EXISTING SIGNS AND SUPPORTS, ANY SIZE AND/OR TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS  COMMODITY CODE: 968-82-038273 REMOVE AND SALVAGE EXISTING SIGN, ANY SIZE AND/OR TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	6	EACH		
00123	COMMODITY CODE: 968-82-019769 SIGNAL TECHNICIAN LABOR, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	200	HOUR		
00124	COMMODITY CODE: 968-82-038274 REMOVE AND SALVAGE OF TRAFFIC SIGNAL MAST ARM AND POLE, INCLUDING REMOVAL OF FOUNDATION, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00125	COMMODITY CODE: 968-82-019821 REMOVE AND SALVAGE OF STRAIN POLE, INCLUDING REMOVAL OF FOUNDATION, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	4	EACH		
00126	COMMODITY CODE: 968-82-019819 REMOVE AND SALVAGE OF EXISTING CABINET AND CONTROLLER - POLE MOUNTED, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	8	EACH		
00127	COMMODITY CODE: 968-82-019818 REMOVE AND SALVAGE OF EXISTING CABINET AND CONTROLLER - BASE MOUNTED, INCLUDING REMOVAL OF FOUNDATION, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	8	EACH		
00128	COMMODITY CODE: 968-82-019835 REMOVAL OF TRAFFIC SIGNAL HANDBOX,, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00129	COMMODITY CODE: 968-82-038275 REMOVAL OF FOUNDATION, ANY TYPE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	3	EACH		
00130	COMMODITY CODE: 968-82-019837 REMOVE AND DISPOSE OF EXISTING SIGNAL EQUIPMENT PER ASSIGNMENT, FIXED TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00131	COMMODITY CODE: 968-82-019841 AS-BUILT FROM EXISTING PLAN OR DISK, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS.	15	EACH		
00132	COMMODITY CODE: 968-82-019840 AS BUILT FROM RESURVEY, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	5	EACH		
00133	COMMODITY CODE: 968-82-038280 FURNISH AND INSTALL 10' LIGHTING ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00134	COMMODITY CODE: 968-82-019814 FURNISH AND INSTALL 20' LIGHTING ARM, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	20	EACH		
00135	COMMODITY CODE: 968-82-038287 LUMINAIRE, WITH PHOTOCCELL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00136	COMMODITY CODE: 968-82-019812 FURNISH AND INSTALL 250 WATT HIGH PRESSURE SODIUM LAMP AND LUMINAIRE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00137	COMMODITY CODE: 968-82-038281 FURNISH AND INSTALL T-BASE FOR STREETLIGHT PEDESTAL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	10	EACH		
00138	COMMODITY CODE: 968-82-038279 INSTALL T-BASE FOR STREETLIGHT PEDESTAL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	15	EACH		
00139	COMMODITY CODE: 968-82-038278 INSTALL STREETLIGHT POLE, 14' AND UNDER, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	20	EACH		
00140	COMMODITY CODE: 968-82-038282 FURNISH AND INSTALL METER SERVICE PEDESTAL, FOR STREETLIGHT PEDESTAL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	2	EACH		
00141	COMMODITY CODE: 968-82-038283	5	EACH		

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LINE NO.	COMMODITY/SERVICE DESCRIPTION	QUANTITY FROM/TO	UNIT	UNIT PRICE	AMOUNT
00142	REMOVE AND DISPOSE OF STREETLIGHT POLE, INCLUDES FOUNDATION REMOVAL, AS PER SPECIFICATIONS  COMMODITY CODE: 968-82-038284 REPLACEMENT OF MULTI-VOLT PHOTOCELL, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	47	EACH		
00143	COMMODITY CODE: 968-82-038285 REPLACEMENT OF STREETLIGHT FUSE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	48	EACH		
00144	COMMODITY CODE: 968-82-038286 CLEAN STREETLIGHT FIXTURE, TRAFFIC SIGNAL CONSTRUCTION, AS PER SPECIFICATIONS	100	EACH		

GRAND TOTAL \$ \_\_\_\_\_

TRAFFIC SIGNAL CONSTRUCTION SERVICES  
 INVITATION TO BID NO. 206398  
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COMPANY NAME: \_\_\_\_\_

FED ID OR SOCIAL SECURITY NO. \_\_\_\_\_

WHERE LANGUAGE IS BRACKETED SELECT ONE OF THE OPTIONS AND DELETE THE OTHER OR INSERT THE INFORMATION REQUESTED. PLEASE CONTACT THE PURCHASING BUREAU AND THE OFFICE OF LAW BEFORE THIS FORM IS MODIFIED

BALTIMORE COUNTY, MARYLAND  
CONTRACT

THIS AGREEMENT made this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_ (the "Agreement") is by and between Baltimore County, Maryland, a body corporate and politic, (hereinafter "County") and [NAME AND ADDRESS OF CONTRACTOR] (hereinafter the "Contractor").

WHEREAS, the said Contractor, hereby covenants and agrees to [perform all services] [deliver all goods], in strict and entire conformity with the Attachment A entitled, "Services and/or Scope of Work to be Performed", "Goods To Be Provided", [and] any Purchase Order subsequently issued and the [Invitation to Bid, Request for Proposal, Request for Quotation] Bid No. \_\_\_\_\_, as amended, and the Contractor's response and any amendments or revisions thereto [If material business terms are contained in correspondence or emails subsequent to initial bid response, Purchasing should list such correspondence and emails here] (collectively, the "Bid").

NOW THEREFORE in consideration of the mutual promises and covenants, the parties hereto agree that the County shall pay the Contractor an amount as set forth herein for [services and/or scope of work rendered][goods provided] in accordance with this Agreement, the other attachments hereto (ALL ATTACHMENTS MUST BE DESCRIBED HERE AND PROPERLY LABELED) and if applicable, the Bid and the Purchase Order, all of which are hereby incorporated into and made a part of this Agreement. Notwithstanding any other terms or provisions of this Agreement, 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 hereunder, 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), then the County 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. In addition the parties hereto agree as follows:

1. Contractor's Duties.

The Contractor shall be an independent Contractor and not an employee of the County, and shall be responsible for the reporting and remittance of all state and federal taxes. The Contractor shall [perform the services] [provide the goods] outlined in Attachment A hereto. The Contractor's [services and/or scope of work to be performed] [goods] will be provided with due care and in a [manner satisfactory to the County] and in accordance with all applicable [professional] standards.

2. Compensation.

2.1 In consideration of the [services and/or scope of work to be performed][goods] to be provided by the Contractor, the County shall pay the Contractor [SELECT ONE OF THE FOLLOWING OPTIONS:][the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_)]

[an amount equal to 90% of the amount invoiced pursuant to Paragraph 2.2 below. Ten percent (10%) of each disbursement shall be retained by the County and disbursed in a lump sum upon completion of the services and/or scope of work described herein][delivery of the goods described herein] in a manner satisfactory to the County, in its sole discretion.] [an hourly rate of \$\_\_\_\_\_ per hour for an approximate total of \_\_\_\_\_ hours and shall reimburse the Contractor for eligible expenses incurred by the Contractor in the performance of the Contractor's responsibilities and obligation under this Agreement. The eligible expenses are set forth in Attachment A [and in no event shall eligible expenses exceed \$\_\_\_\_\_ during the entire term of this Agreement].] [in accordance with the unit prices set forth in the Bid] [in accordance with the fee schedule attached hereto as Attachment \_\_\_\_].

2.2 The Contractor shall submit invoices to the County [SELECT ONE OF THE FOLLOWING OPTIONS: [monthly] [quarterly] [insert the time period for submission of invoices]]. The Contractor's invoices shall reflect the:

- Contractor's name
- Address
- Federal tax identification number
- Order number and line number(s) that correspond with resulting orders
- [Goods provided][Services and/or scope of work performed] during the preceding billing period

Original invoices shall be submitted to Office of Budget and Finance, Disbursements, 400 Washington Avenue, Room 148, Towson, Maryland 21204. [DELETE IF NOT APPLICABLE] Copies of invoices shall be sent to [Agency Name and Address]. Invoices in the proper form and approved by the County shall be paid by the County within thirty (30) days of receipt thereof. The County reserves the right to approve such invoices, in its sole discretion, and to request such detail and additional information as the County, in its discretion deems appropriate.

[DELETE IF NOT APPLICABLE] [Cash Discount Periods will be computed from the date of delivery and acceptance of the goods ordered, or the date of receipt of correct and proper invoices prepared in accordance with terms of Baltimore County's order, whichever date is later.]

2.3 [In no event shall the compensation paid to the Contractor exceed the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_) [in any contract year] [during the Initial Term of this Agreement, as defined below] [or during any renewal period] [provided, however, that the County may entertain a request for escalation in any year subsequent to the first year in accordance with [SELECT ONE OF THE FOLLOWING: [Paragraph \_\_\_\_ of the Invitation to Bid] OR [Paragraph \_\_\_\_ of this Agreement]]. [In no event shall the total compensation paid to the

Contractor under this Agreement exceed the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_ ) during the entire term of this Agreement including renewals thereof.]

3. Term.

3.1 This Agreement shall be [retroactively] effective [SELECT ONE OF THE FOLLOWING: [as of the date above written] [when it has been properly signed by all parties hereto][when executed by the County] and shall continue through [Insert Date] [(the "Initial Term")], [ , at which time the County may exercise its option to renew set forth in Paragraph 3.2 below], unless sooner terminated pursuant to this Agreement. [The County shall have the option of extending this Agreement at the end of the Initial Term or any renewal term for an additional [SELECT ONE OF THE FOLLOWING TIME PERIODS: [30] [60] [90] days], on the same terms and conditions, by providing written notice of its intent to extend to the Contractor. In the event the County elects to extend this Agreement, the Contractor shall continue to submit invoices monthly, for [services and/or scope of work rendered] [goods provided] in the manner prescribed in Paragraph 2 hereof. Any compensation [or reimbursement] paid during the extension period shall, when added to sums already disbursed hereunder, not exceed the maximum amount set forth in Paragraph 2 of this Agreement. In the event any extension changes the terms and conditions set forth herein, including but not limited to a change in the compensation, approval of the Baltimore County Council may be required.]

3.2 The County reserves the right to renew this Agreement for [insert renewal period] on the same terms and conditions set forth herein. [INSERT ANY CHANGES TO THE TERMS, i.e. COMPENSATION, UPON RENEWAL OF AGREEMENT, OTHERWISE, IT MUST BE RENEWED ON THE SAME TERMS AND CONDITIONS] The County will automatically renew this Agreement at the end of the Initial Term and each renewal term (except the last) unless it provides written notice of non-renewal to the Contractor prior to the end of the then current term. Unless set forth in a written amendment, the compensation [, reimbursement] and manner of payment set forth in Paragraph 2 shall remain unchanged, including but not limited to, the maximum amount of compensation [and reimbursement] available hereunder. In the event any renewal changes the terms and conditions set forth herein, the approval of the Baltimore County Council may be required.]

4. Contractor's Representations and Warranties. The Contractor hereby represents the following:

4.1 [USE FOR CORPORATIONS, LIMITED OR GENERAL PARTNERSHIPS OR LIMITED LIABILITY COMPANIES; DELETE IF CONTRACTOR IS AN INDIVIDUAL] The Contractor is a [corporation][limited partnership][general partnership][limited liability company], duly formed and validly existing under the laws of the State of [INSERT STATE OF INCORPORATION] and is qualified to do business and is in good standing in the State of Maryland.

4.2 [USE FOR CORPORATIONS, LIMITED OR GENERAL PARTNERSHIPS OR LIMITED LIABILITY COMPANIES; DELETE IF CONTRACTOR IS AN INDIVIDUAL] The Contractor has the power and authority to consummate the obligations and responsibilities contemplated

hereby, and has taken all necessary action to authorize the execution, delivery and performance required under this Agreement.]

4.3 The Contractor and the person executing this Agreement for the Contractor each warrant that [he][she] is [duly authorized by the Contractor] [is the person set forth in the Procurement Affidavit with the authority] to execute and seal this Agreement on the Contractor's behalf.

4.4 SELECT ONE OF THE FOLLOWING OPTIONS: A. [The [professional] services and/or scope of work to be provided under this Agreement shall be performed competently and with due care, in accordance with all applicable laws, codes, ordinances, regulations and licensing requirements and free from defects in workmanship and materials, as applicable. The parties understand and agree that this Agreement may be for the provision of a combination of goods and services. In such case, the parties hereby agree that the warranties of merchantability and fitness for a particular purpose and use shall apply to the portion of this Agreement that is pertaining to or for goods. The parties understand and agree that County shall rely upon all express warranties contained in this Agreement, including but not limited to the Bid, and any sample or model presented by Contractor and expressly accepted by the County.] OR B. [The goods to be delivered shall comply with the implied warranties of merchantability, fitness for particular purpose and use and warranties of title and against infringement, and all express warranties contained in this Agreement, including but not limited to the Bid.]

4.5 The Contractor has obtained and shall continue to maintain, at its own cost, such licenses and certifications as are necessary to provide the services and/or scope of work and provide the goods, as applicable, required pursuant to this Agreement, and shall present such licenses to the County upon its request for the same.

4.6 The Contractor has delivered to the County such written financial statements, schedules or reports in such form and containing such information and accompanied by such documents as requested or required by the County concerning the financial condition of Contractor. Such documentation fairly and accurately represents the financial condition of Contractor as of their date and the results of its operations for the period then ended. There has been no material adverse change in the financial condition of the Contractor or the results of its operations since the date of such financial statements, schedules or reports.

4.7 All representations and warranties made in the Procurement Affidavit[, the Bid response], the Contract Affidavit, attached hereto as Attachment C and incorporated herein, and this Agreement remain true and correct in all respects throughout the term of this Agreement.

5. Termination for Convenience.

5.1 The County may terminate this Agreement, without cause, by providing written notice thereof to the Contractor at least thirty (30) days prior to the intended date of termination at the address set forth below, or at such other address as may be later designated

by the Contractor in writing. The Contractor acknowledges that the absence of a reciprocal right of termination for convenience does not render this Agreement illusory or unenforceable.

5.2 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. Payment shall be made in accordance with the provisions of Paragraph 2 of this Agreement.

6. Insurance.

The Contractor shall provide evidence of insurance as required by the County pursuant to the insurance requirements attached hereto as Attachment \_\_\_\_ in form and amounts acceptable to the County. The Contractor shall maintain the insurance coverages required by the County while this Agreement is in force, and provide documentation of such insurance in a form satisfactory to the County. Such documentation may, in the discretion of the County, be in the form of binders or declarations from the insurance company. [INCLUDE IF THERE ARE ATTACHED INSURANCE REQUIREMENTS: In the event of a conflict between the provisions of the attached insurance requirements and this Agreement, the provisions of this Agreement shall prevail.]

7. Default. The term "Default" as used in this Agreement shall mean the occurrence or happening, from time to time, of any one or more of the following:

7.1 Representations and Warranties. If any representation or warranty, expressed or implied, of the Contractor and pertaining to this Agreement shall prove at any time to be incorrect or misleading in any material respect either on the date when made or throughout the term of this Agreement.

7.2 Compliance with Covenants and Conditions. If the Contractor shall fail to comply with the terms of any covenant, condition, agreement or any express or implied warranty contained in this Agreement.

7.3 Performance of Contractual Obligations. If the services and/or scope of work hereunder are not performed in good faith and in accordance with the provisions of this Agreement [FOR CAPITAL IMPROVEMENT CONTRACTS: , including but not limited to, time frames specified or the completion schedule which is described in Attachment A.][If the delivery of the goods that are the subject of this Agreement [SELECT ONE: [was not made][is not being made] in good faith and/or in accordance with this Agreement, including but not limited to, the delivery schedule which is attached hereto as Attachment \_\_\_\_].

7.4 Conditions Precedent to Any Disbursement. If the Contractor shall be unable to satisfy any condition precedent to its right to receive a disbursement.

7.5 Bankruptcy. If the Contractor becomes insolvent or generally does not pay its debts as they become due, or if a petition for relief is filed by the Contractor in a bankruptcy court, or if the Contractor applies for, consents to, or acquiesces in the appointment of a trustee,

custodian, or receiver for the Contractor or any of its assets and property, or makes a general assignment for the benefit of creditors; or in the absence of such application, consent, or acquiescence, a trustee, custodian, or receiver is appointed for the Contractor or for a substantial part of the assets and property of the Contractor and is not discharged within thirty (30) days; or any bankruptcy, reorganization, debt arrangement, or other proceeding or case under any bankruptcy or insolvency or any dissolution or liquidation proceeding is instituted against the Contractor and is consented to or acquiesced to by the Contractor or remains for sixty (60) days undischarged; or the Contractor takes any action to authorize any of the actions described in this subsection.

8. **Remedies for Default.**

8.1 The County shall have the right upon the happening of any Default, without providing notice to the Contractor:

a. In addition to other available rights and remedies, to terminate this Agreement immediately, in whole or in part;

b. To suspend the Contractor's authority to receive any undisbursed funds; and/or

c. 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 of any covenant, term or condition set forth in this Agreement, or for damages or other relief, or proceed to take any action authorized or permitted under this Agreement, including but not limited to, calling upon any security, letter of credit, or bond and any other action authorized or permitted by applicable law, regulation, or equity.

8.2 Upon termination of this Agreement for default, the County may elect to pay the Contractor for [services and/or scope of work provided] [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.

9. **Remedies Cumulative and Concurrent.**

No remedy herein conferred upon or reserved to the County is intended to be exclusive of any other remedies provided for in this Agreement, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given hereunder, or now or hereafter existing at law or in equity or by statute. Every right, power and remedy given to the County shall be concurrent and may be pursued separately, successively or together against the Contractor, and every right, power and remedy given to the County may be exercised from time to time as often as may be deemed expedient by the County.

10. **Confidential Information.**

The Contractor shall not disclose any documentation and information of any kind or nature disclosed to the Contractor in the course of its performance of duties hereunder without the express prior written consent of the County.

11. **Conflict of Interest.**

The Contractor represents and warrants that there exists no actual or potential conflict of interest between its performance under this Agreement and its engagement or involvement in any other personal or professional activities. In the event such conflict or potential conflict arises during the term of this Agreement, or any extension or renewal thereof, the Contractor shall immediately advise the County in writing thereof.

12. **Assignment.**

12.1 Neither the County nor the Contractor shall assign, subcontract or transfer its interest or obligations under this Agreement to any third party, without the written consent of the other. The Contractor further agrees to provide a minimum of ninety (90) days' written notice to the County prior to entering into any bankruptcy, merger or consolidation where the surviving entity will be unwilling or unable to accept the Contractor's obligations hereunder, to enable the County to procure the goods or services elsewhere. In the event the cost of procuring such alternate goods or services increases the cost to the County, and/or delays delivery time of any product, in addition to any other remedies available to the County, the Contractor shall pay to the County, as damages, any additional costs incurred.

12.2 Nothing herein shall be construed to create any personal or individual liability upon any employee, officer or elected official of the County, nor shall this Agreement be construed to create any rights hereunder in any person or entity other than the parties of this Agreement.

13. **Delegation of Duties.**

The Contractor shall not delegate the Contractor's duties under this Agreement without the prior written consent of the County.

14. **Indemnification.**

14.1 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 fees 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 this Agreement by the Contractor or anyone under agreement with the Contractor to perform duties under this Agreement. The Contractor shall not be responsible for acts of gross negligence or willful misconduct committed by the County.

14.2 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 fees 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 Contractor's work under this Agreement.

14.3 Unless notified by the County in writing to the contrary, Contractor shall provide defense for County, its employees, agents and officials in accordance with this Article 14. Contractor shall allow County to participate in said defense of County, its employees, agents and officials, to the extent and as may be required by the County and the Contractor shall cooperate with County in all aspects in connection therewith.

15. **Integration and Modification.**

This Agreement sets forth the entire agreement between the parties relative to the subject matter hereof. No representation, promise or condition, whether oral or written, not incorporated herein shall be binding upon either party to this Agreement. No waiver, modification or amendment of the terms of this Agreement shall be effective unless made in writing and signed by an authorized representative(s) of the party sought to be bound thereby.

16. **Fee Prohibition.**

The Contractor warrants and represents that it has not employed or engaged any person or entity to solicit or secure this Agreement, and that it has not paid or agreed to pay any person or entity a fee or any other consideration contingent on the making of this Agreement. If any suit, claim, or demand shall arise concerning such a fee, the Contractor agrees to indemnify and hold harmless the County, from all such claims, suits or demands.

17. **No Partnership.**

Nothing contained in this Agreement shall be construed in any manner to create any relationship between the Contractor and the County other than expressly specified herein and the Contractor and the County shall not be considered partners or co-venturers for any purpose on account of this Agreement.

18. **Governing Law.**

This Agreement shall be governed and construed in accordance with the laws of the State of Maryland and Baltimore County, Maryland.

19. **Recitals and Conflicting Terms.**

[19.1] The Recitals are hereby incorporated into this Agreement. The Contractor acknowledges that any Purchase Order issued on or after the effective date of this Agreement is also hereby incorporated and made a part of this Agreement, provided, however that any preprinted terms and conditions of any purchase order or other ordering document issued by the County in connection with this Agreement that are in addition to or inconsistent with the terms and conditions of the Agreement, shall not be binding on the Contractor and shall not be deemed to modify this Agreement.

[19.2] In the event of a conflict between the Bid (including standard specifications) and this Agreement, the provisions of this Agreement (without the conflicting terms in the Bid) shall prevail.

[19.3] If a conflict arises between the provisions of this Agreement and any Purchase Order, the provisions of this Agreement shall prevail.

**[USE FOR CAPITAL IMPROVEMENT ONLY]** [19.4 In the event of a conflict between this Agreement, the Baltimore County Department of Public Works' Standard Specifications For Construction And Materials, and the Standard Details For Construction, the parties hereto agree that the provisions of this Agreement shall prevail.]

20. **Severability.**

If any of the provisions in this Agreement 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.

21. **Time is of the Essence.**

TIME IS OF THE ESSENCE WITH RESPECT TO PERFORMANCE OF THE TERMS AND CONDITIONS OF THIS AGREEMENT.

22. **Funding.**

The failure of the County to appropriate sufficient funds in any future fiscal year to provide funds for this Agreement shall entitle the County to terminate this Agreement without prior notice to the Contractor.

23. **Counterparts.**

This Agreement may be executed in any number of counterparts and by the 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.

24. **Ownership of Goods.**

All finished or unfinished work or work product, reports, or goods that are the subject of this Agreement [DELETE IF NOT APPLICABLE: including any licenses or consents acquired by the Contractor for performance hereunder.] shall be and shall remain the property of the County.

25. **Discrimination Prohibited.**

25.1 In the execution of the obligations and responsibilities hereunder, including, but not limited to, hiring or employment made possible by or relating to this Agreement, the Contractor shall not:

a. Fail or refuse to hire, or discharge, any individual, or otherwise to discriminate against any individual with respect to the individual's compensation, terms, conditions, or privileges of employment, because of such individual's 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;

b. Limit, segregate, or classify its employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect the individual's status as an employee, because of the individual's 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; or

c. Request or require genetic tests or genetic information as a condition for hiring or determining benefits.

25.2 All solicitations or advertisements for employees shall state that the Contractor is an equal opportunity employer.

26. **Reports / Information/Inspections / and Audits.**

**[DELETE IF NOT APPLICABLE: 26.1 The Contractor shall furnish the County with the following reports or information [insert reporting requirements]:** Reports produced for the County under this Agreement should be on recycled and recyclable paper printed on both sides.

[26.2] 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 copying by the County, its employees or agents, of all records, information and documentation of the Contractor related to the subject matter of this Agreement, including, but not limited to, all contracts, invoices, payroll, and financial audits. Contractor shall retain all records, information and documentation of the Contractor related to this Agreement, including but not limited to, all contracts, invoices, payroll, and financial audits for at least three (3) years after the termination of this Agreement.

**[DELETE IF NOT APPLICABLE: 26.3** The County may request the Contractor, at the expense of the Contractor, to have performed an independent audit of the Contractor's financial information including but not limited to balance sheets, statement of revenue and expenses, and receipts and disbursements. The independent auditor selected shall be subject to the approval of the County.]

27. **Notice.**

Any notice required to be delivered shall be deemed to have been received when the notice has been sent by certified mail, return receipt, overnight carrier, or hand delivered with signed receipt to the following address and individual or at such other address and/or such other individual as a party may identify in writing to the other party:

[Make it a sentence or column, depending on space available]

FOR THE COUNTY: [Contact Name and/or Job Title, address, telephone number and fax number]

[IF DEEMED NECESSARY] [ADDITIONAL CONTACT] FOR THE COUNTY: [Contact Name, County Attorney, address, telephone number and fax number] [DELETE IF NOT APPLICABLE]

[IF DEEMED NECESSARY] BALTIMORE COUNTY OFFICE OF LAW: [Contact Name, address, telephone number and fax number] [DELETE IF NOT APPLICABLE]

[Make it a sentence or column, depending on space available]

**FOR THE CONTRACTOR:**

/[Contact Name,

address

telephone number and fax number]

[IF DEEMED NECESSARY] [ADDITIONAL CONTACT] [DELETE IF NOT APPLICABLE]

**FOR THE CONTRACTOR:**

[Contact Name,

address

telephone number and fax number]

[DELETE IF NOT APPLICABLE: 28. Recycled and Recyclable Products.

Any goods delivered under this Agreement that require packaging must be packed in recycled and recyclable materials.]

[DELETE IF NOT APPLICABLE: 29. HIPAA. § Compliance With Federal HIPAA And State Confidentiality Law

A. The Contractor acknowledges its duty to become familiar with and comply, to the extent applicable, with all requirements of the federal Health Insurance Portability and Accountability Act (HIPAA), 42 U.S.C. §§ 1320 *et seq.*, as the same may be amended from time to time and implementing regulations including 45 CFR Parts 160 and 164, as the same may be amended from time to time, the Contractor also agrees to comply with the Maryland Confidentiality of Medical Records Act (MCMRA), Md. Code Ann. Health-General §§4-301 *et seq.*, as the same may be amended from time to time. This obligation includes:

1. As necessary, adhering to the privacy and security requirements for protected health information and medical records under federal HIPAA and State MCMRA and making the transmission of all electronic information compatible with the federal HIPAA requirements; and
2. Providing good management practices regarding all health information and medical records.

B. [If the County determines that functions to be performed constitute business associate functions as defined in HIPAA, t][T]he Contractor must execute a business associate agreement as required by HIPAA regulations at 45 CFR §164.501, as the same may be amended from time to time. The fully executed business associate agreement must be submitted within 10 working days after notification of selection, or within 10 days after award, whichever is earlier. Upon expiration of the ten-day submission period, if the County determines that the Contractor has not provided the HIPAA agreement required by this Agreement, the Procurement Officer, upon review of the Baltimore County Office of Law, may determine the Contractor to be in default of this Agreement.

C. Protected Health Information as defined in the HIPAA regulations at 45 CFR 160.103 and 164.501, as, the same may be amended from time to time, means information transmitted as defined in the regulations, that is individually identifiable; that is created or received by a healthcare provider, health plan, public health authority, employer, life insurer, school or university, or healthcare clearinghouse; and that is related to the past, present, or future physical or mental health or condition of an individual, to the provision of healthcare to an individual, or to the past, present, or future payment for the provision of healthcare to an individual. The definition excludes certain education records as well as employment records held by a covered entity in its role as employer.

30. **Political Contribution Disclosure Affirmation.**

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, as the same may be amended from time to time, 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, of at least \$100,000.00, to 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

31. **No Waiver, Etc.**

No failure or delay by the County to insist upon the strict performance of any term, condition or covenant of this Agreement, 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.

32. **Survival.**

Those sections in this Agreement which by their nature are intended to survive, including but not limited to Sections 4 (Contractor's Representations and Warranties), 10 (Confidential Information), 14 (Indemnification), 26 (Reports/Information/and Audits), shall survive the termination of this Agreement.

**[USE FOR CAPITAL IMPROVEMENT ONLY]33. Applicable Laws, Codes, Ordinances, and Regulations.**

The services and/or scope of work to be provided under this Agreement shall be performed competently and with due care, and in accordance with all applicable laws, codes, ordinances, regulations (including but not limited to the Baltimore County Department of Public Works' Standard Specifications For Construction and Materials and the Standard Details For Construction).

**[INSERT ANY SPECIAL CLAUSES HERE, SUCH AS WARRANTIES, ETC.]**

IN WITNESS WHEREOF, it is the intent of the parties that Contractor has signed this Agreement under seal and further, that the parties have executed this Agreement the day and year first written above.

WITNESS:

**[INSERT LEGAL NAME OF CONTRACTOR]**

Federal Identification No. \_\_\_\_\_

By: \_\_\_\_\_ (SEAL)

[Insert Name]

[Insert Title]

WITNESS:

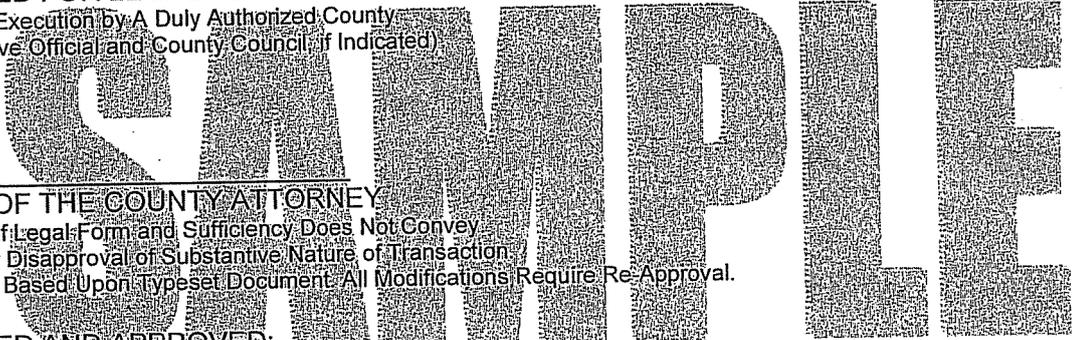
**BALTIMORE COUNTY, MARYLAND**, a body corporate and politic

By: \_\_\_\_\_ Date \_\_\_\_\_

Fred Homan  
Administrative Officer

**APPROVED FOR LEGAL FORM AND SUFFICIENCY\***

(Subject to Execution by A Duly Authorized County Administrative Official and County Council, if Indicated)



**OFFICE OF THE COUNTY ATTORNEY**

\*Approval of Legal Form and Sufficiency Does Not Convey Approval or Disapproval of Substantive Nature of Transaction. Approval is Based Upon Typeset Document. All Modifications Require Re-Approval.

REVIEWED AND APPROVED:

\_\_\_\_\_  
[INSERT DEPT. AND DEPT. HEAD]

BALTIMORE COUNTY COUNCIL

By: \_\_\_\_\_ Date \_\_\_\_\_  
Chairman

ATTACHMENT A

[SERVICES AND/OR SCOPE OF WORK TO BE PERFORMED] [GOODS TO BE PROVIDED]  
[FOR CAPITAL IMPROVEMENT CONTRACTS: TIME FRAME OR COMPLETION SCHEDULE  
WITH INTERIM BENCHMARKS, AS APPLICABLE]

**SAMPLE**

THE ABOVE ARE IN ADDITION TO ANY OTHER SERVICES AS SET FORTH IN THE [REQUEST  
FOR PROPOSAL # / INVITATION TO BID #] AND THE BID RESPONSE.

ATTACHMENT B

[INSURANCE INFORMATION]

**SAMPLE**

**ATTACHMENT C**  
**CONTRACT AFFIDAVIT**

**A. AUTHORIZED REPRESENTATIVE**

I HEREBY AFFIRM THAT:

I am the [title] \_\_\_\_\_ and the duly authorized representative of [business] \_\_\_\_\_ (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. BID/PROPOSAL AFFIDAVIT AFFIRMATIONS VALID**

I FURTHER AFFIRM THAT:

To the best of my knowledge, information, and belief, each of the affirmations, certifications, or acknowledgments contained in that certain Procurement Affidavit dated \_\_\_\_\_, and executed by (me) ( \_\_\_\_\_ ) for the purpose of obtaining the contract to which this Affidavit is attached remains true and correct in all respects as if made as of the date of this Contract Affidavit and as if fully set forth herein.

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.

Date: \_\_\_\_\_

By: \_\_\_\_\_

Name:

Title:

(Authorized Representative and Affiant)

## GP-SECTION 1 DEFINITIONS AND TERMS

On page 2 of the Standard Specifications

### GP-1.03 ORGANIZATIONAL DEFINITIONS

**ADD:** The following:

Whenever the words or phrases listed in the first column below appear in the Standard Specifications, they shall be interpreted as shown in the second column.

<u>Word or Phrase</u>	<u>Interpretation</u>
State State of Maryland State Highway Administration	Baltimore County, Maryland
Department Administration	Department of Public Works of Baltimore County
Administrator Engineer Procurement Officer	Director of Public Works (Unless another public official is required by the Charter or public local laws of Baltimore County, Maryland)
Deputy Chief Engineer	Chief, Bureau of Engineering and Construction and/or Chief, Division of Construction Contracts Administration

### GP-1.05 DEFINITIONS

**ADD :** The following :

**Agreement** - The Agreement between the Contractor and the County, which is a document forming part of the contract.

**Baltimore County** - Baltimore County, Maryland, a body corporate and politic.

**Laboratory** - The testing laboratory of the State Highway Administration or any other laboratory which may be designated.

## GP-SECTION 2 BIDDING REQUIREMENTS AND CONDITIONS

On page 7 of the Standard Specifications.

**INSERT:** The following:

### GP-2.00 GENERAL

#### PREQUALIFICATION OF BIDDERS

Only the bid of a Contractor who holds a valid Baltimore County Prequalification Certificate 10 days prior to the date of Bid Opening will be considered. A Prequalified Contractor is one whose rating and classification have been determined by the Prequalification Committee and ratified by the Director of Public Works.

All applicants for prequalification must submit to the Department of Public Works the Contractor's Prequalification Application.

These forms may be obtained from the Division of Construction Contracts Administration or on the website at [www.baltimorecountyonline.info/constructioncontracts](http://www.baltimorecountyonline.info/constructioncontracts). They must be filed with the Department of Public Works and 60 days should be allowed for processing. Prequalification must be obtained 10 days before the date of Bid opening.

A prospective bidder, when prequalifying, shall state in the application the extent and type of work the firm is considered himself qualified to handle at one time. The firm's experience shall show all principal public projects completed in the last three years, or, if none, the principal private projects. This information shall be the basis for a determination of the financial rating and work classification. Following this evaluation, the Contractor may receive a Certificate of Prequalification from the Director of Public Works.

A Prequalification Certificate, subject to the following provision, is valid for 12 to 36 months following date of issue. The County reserves the right to re-evaluate a Prequalified Contractor without cause. A bidder who holds a Prequalification Certificate shall furnish additional information bearing on the firm's qualification as may be required. The County reserves the right to reject, unopened, the bid of any bidder who fails to furnish promptly and properly all the information called for when so notified.

A Contractor, upon request, may review his/her prequalification file, except for the Reference Inquiry rating forms, which are confidential.

A Contractor, dissatisfied with the firm's rating or classification or both, may request a reconsideration on the basis of additional or revised information submitted to the committee in writing and may request a meeting with the committee to support the resubmittal.

Each bidder shall further qualify as otherwise called for in the contract documents.

A prospective bidder may purchase plans if the firm's Prequalification Certificate is valid. Materials suppliers and other interested parties may purchase Plans without prequalification, such Plans to be marked: "NOT FOR BIDDING PURPOSES".

On page 10 of the Standard Specifications

**GP-2.07 PROPOSAL GUARANTY**

**DELETE** : In its entirety :

**INSERT** : The following :

No Proposal will be considered unless accompanied by a guaranty of the character and in the amount specified herein and in an amount not less than the specified dollar value indicated in the Proposal Form, made payable to Baltimore County, Maryland. The character of the guaranty must be a bid bond or certified check.

**GP-SECTION 3  
AWARD AND EXECUTION OF CONTRACT**

On page 19 of the Standard Specifications

**GP-3.02 RETURN OF PROPOSAL GUARANTY**

**DELETE** : All terminology under this part in its entirety.

**INSERT** : The following :

Proposal guaranties of all but the lowest three bidders are considered released immediately following opening and review of the Proposals. The guaranties of the lowest three bidders are considered effective until a Contract Agreement is executed or until all bids are rejected.

On page 20 of the Standard Specifications

**GP-3.03 PERFORMANCE BOND AND PAYMENT BOND REQUIREMENTS**

**ADD** : The following after “ (b) Performance and Payment Bonds.”

The Contractor shall be responsible for notifying the Baltimore County Traffic Engineering and Transportation Planning Bureau (887-3554) at least 14 days prior to laying the final base course and curb and gutter in the vicinity of intersections where traffic signalization may be modified or installed. When the Traffic Engineering and Transportation Planning Bureau is contacted, a schedule will be set up as to when representatives of the Bureau shall be on site to install all required poles and underground wiring.

The Contractor shall also be responsible for notifying the Traffic Engineering and Transportation Planning Bureau at least 14 days before laying the final course. At this time, the Bureau shall install detector loops on the final base course. When the Traffic Engineering and Transportation Planning Bureau forces are working on site, the Contractor shall schedule his forces so as not to conflict with the Bureau's operations.

The Contractor shall notify the Baltimore County Fire Department (887-4511) before starting any work involving the removal or relocation of existing fire hydrants.

The Contractor shall notify utility companies and public agencies at least 48 hours before digging. The name and number of the Utility Service Protections Center is: MISS UTILITY = 1 (800) 257-7777

Utilities which are non-participants in MISS UTILITY may be encountered.

**GP – SECTION 5  
CONTROL OF THE WORK**

On page 35 of the Standard Specifications

**GP-5.14 FILING OF CLAIM BY CONTRACTOR**

**ADD** : As paragraph (e) :

- (e) The chief of the Bureau of Engineering and Construction, as referee, shall decide any and all claims. The written decision of the Chief of the Bureau of Engineering and Construction shall be final and binding unless disputed in writing to the Director of Public Works within 30 days of delivery to the parties.

**GP-5.15 DISPUTES**

**DELETE** : In its entirety.

**INSERT** : The following :

- A. Subject to, and without in any way enlarging or limiting the other provisions of this contract, the parties to any agreement which adopts by reference these Specifications, do appoint the County Administrative Officer as "Arbiter" pursuant to the Maryland Uniform Arbitration Act.
- B. The parties further grant the County Administrative Officer the right to delegate this responsibility and authority in writing to a registered Professional Engineer, independent of the Bureau of Engineering and Construction, or to any other independent person, agency or association.
- C. The decisions of the "Arbiter" shall be final and binding on both parties, subject only to such appeals as are established by the Maryland Uniform Arbitration Act.
- D. No dispute is to be brought before the County Administrative Officer under this provision which has not first been reviewed and decided by the Chief of Engineering and Construction, serving as referee.

**GP-SECTION 7  
LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC**

On page 38 of the Standard Specifications.

**GP-7.01 COMPLIANCE WITH THE LAWS**

**DELETE** : Paragraph (c) in its entirety.

**INSERT** : The following :

- (c) Although Baltimore County, Maryland is exempt from the requirements and provisions of Title 21 of COMAR, direct references to specific COMAR articles contained in Standard Specifications are adopted as if copied herein, unless this conflicts with the Charter or public local laws of Baltimore County, Maryland.

On page 41 of the Standard Specifications.

**GP-7.07 DETOURS**

**ADD** : The following as second paragraph:

Before using a specified or approved detour route, the Contractor shall notify the Traffic Engineering and Transportation Planning Bureau (410-887-3554) seven (7) days in advance of road closure. The Traffic Engineering and Transportation Planning Bureau will issue a road closure permit notifying the necessary governmental agencies.

On page 53 of the Standard Specifications.

**GP-7.31 SMALL BUSINESS PROCUREMENTS**

**DELETE** : In its entirety.

**INSERT** : The following :

If the solicitation for bid indicates that this procurement has been designated for a small business set-aside, notice will be provided in the Special Provisions or as an attachment to the Proposal.

**GP – SECTION 8  
PROSECUTION AND PROGRESS**

On page 57 of the Standard Specifications.

**GP-8.05 LIMITATIONS OF OPERATIONS**

**ADD** : The following as second paragraph:

No work, except for emergencies, shall be done on Saturdays, Sundays or holidays without the prior approval of the Engineer. Approval to work on Saturdays, Sundays and holidays shall be obtained 48 hours in advance.

**GP-SECTION 9  
PAYMENT**

**DELETE** : In its entirety :

**INSERT** : The following :

This section does not apply to this contract.

## TERMS AND CONDITIONS

### TC SECTION 4 CONTROL OF WORK

#### TC-4.01 WORKING DRAWINGS.

(a) General.

On page 96 of the Standard Specifications.

**ADD:** The following after the last paragraph.

Four (4) sets of working drawings shall be submitted for review of the Engineer. The submittal should be sent to Attention: Design Division Section Chief, The Bureau of Traffic Engineering and Transportation Planning, 111 West Chesapeake Avenue, Room 326, Towson, Maryland 21204.

If the County will be working on an SHA project, the Contractor will be required to follow the SHA submittal requirements and will be required to have all submittals approved before starting the project. Otherwise, the Contractor can submit four (4) sets of working drawings to the County as required above.

## TC SECTION 7 PAYMENT

**DELETE:** In its entirety.

**INSERT:** The following:

GP-Section 9 (Payment) is not applicable to this contract. The provisions of TC-Section 7 shall apply.

### TC-7.01 MEASUREMENT OF QUANTITIES

For all items of work, other than those to be paid by lump sum, after the work is completed and before final payment is made, the Engineer will make final measurements to determine the quantities of various items of work performed as the basis for final settlement. The Contractor in case of unit price items will be paid for the actual amount of work performed and for the actual amount of materials in place, in conformance with the Specifications and final measurements. All work completed under the contract will be measured by the Engineer in conformance with the standards of weights and measures recognized by the National Bureau of Standards.

All longitudinal measurements for area will be made along the actual surface and not horizontally, and no deductions will be made for individual fixtures having an area of 9 square feet or less. For all transverse measurements for area of base course and pavements, the dimensions to be used in calculating the pay area will be the neat dimensions shown on the Plans or ordered in writing by the Engineer.

Structure measurements shall conform to the neat lines shown on the Plans or as directed in writing, unless otherwise provided for elsewhere in the Contract Documents.

Volumes of excavation, tamped fill, and borrow pits will be calculated per cubic yard from the cross section and the use of average end area formulas. Volumes of other work such as masonry, removal of masonry, etc. will be calculated using arithmetical formulas. Where the volume is bounded by varying dimensions and there are no simple volumetric formulas applicable, frequent cross sections will be taken and the cubic yard volume computed from average end area formulas.

Cement will be measured by weight.

All items which are measured by the linear foot such as pipe culverts, traffic barrier, underdrains, etc. will be measured parallel to the base or foundation upon which such structures are placed unless otherwise specified in the Contract Documents.

The term gauge when used in connection with the measurement of uncoated steel sheet and light plates shall mean the U.S. Standard Gauge, except that when reference is made to the measurement of galvanized or aluminum sheets used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing, the term gauge shall mean that specified in M 36, M 167, M 196 or M 197.

When the term gauge refers to the measurement of wire, it shall mean the Washburn & Moen wire gauge as referenced in the New Departure Handbook. A tolerance of plus or minus 0.003 inch shall apply.

The term ton shall mean the short ton consisting of 2000 pounds avoirdupois. All materials, which are specified by the ton, shall be weighed on accurate, approved scales conforming to the requirements of the National Bureau of Standards Handbook 44. A digital recorder and printout shall be required on all truck scales. The digital recorder shall produce a printed record of the gross, tare, net weights, the time, date, truck identification, and contract number. Provisions shall be made so that the scales may not be manually manipulated during the process. The system shall be interlocked to allow printing only when the scale has come to rest.

Except for computer operated scales, all weights shall be certified by a bonded weigh person supplied by the Contractor, producer, or supplier. The security bond shall be one hundred thousand dollars (\$100,000).

If the material is shipped by rail, the car weight shall be accepted but the payment will be limited to the actual weight of material. Car weight will not be acceptable for material to be passed through mixing plants.

All materials for which measurements are obtained by the cubic yard shall be hauled in approved vehicles and measured at the point of delivery. No allowance will be made for the settlement of material in transit. Approved vehicles for this purpose shall be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. Unless all approved vehicles are of uniform capacity, each approved vehicle shall bear a plainly legible identification mark indicating the specific approved capacity. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed; and the weight will be converted to cubic yard for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Laboratory and shall be agreed to by the Contractor before the method of measurement of pay quantities will be approved by the Engineer.

Liquid asphalt material delivered for the project will be measured by volume in each railroad tank car, tank truck, distributor tank, or drums in which it is delivered. The measurements will be taken when the asphalt material is of a uniform temperature and free from air bubbles, and the temperature of the material will be recorded.

The volumetric measurement of the asphalt material will be based upon a temperature of 60 F.

Reference is made to D 1250, Petroleum Measurement Tables.

Only the quantity of asphalt material actually placed in the work and accepted will be considered in determining the amount due the Contractor.

Timber will be measured by the thousand board foot measurement (MBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term lump sum when used, as an item of payment, will mean complete payment for the unit of work described.

When complete structure or structural unit (in effect, lump sum work) is specified as the unit measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured in hours of actual working time, moving in and moving out costs, if any, and necessary traveling time of the equipment within the limits of the project except when special conditions make some other method of measurement desirable.

#### **TC-7.02 PAYMENT ALLOWANCES FOR STORED MATERIAL**

When the Contractor requests payment allowance for materials, the following terms and conditions shall apply:

- (a) For superstructure members delivered on the project site, an allowance of 100 percent of the material cost plus freight charges as invoiced may be made provided the cost does not exceed 90 percent of the contract price of the applicable contract item. The allowance will be based upon validated invoices or bills for material including freight charges, and a copy thereof shall be made a part of the documented records for the project.
- (b) For reinforcement steel, piling, pipe, traffic barrier, signs and sign assemblies, and other nonperishable material in storage on the project, but excluding aggregates, cement, seed, plants, fertilizer or other perishable items, an allowance of 100 percent of the invoiced cost of the material plus freight charges to the Contractor may be made provided the cost does not exceed 90 percent of the contract price of the applicable contract item. Such material shall be delivered and stock-piled at the project site after being tested by the Administration and found to have conformed to the Specifications or to have been accepted under an approved certification program prior to the allowance.
- (c) No allowance will be made for fuels, form lumber, falsework, temporary structures, or other materials of any kind, which will not become an integral part of the finished construction. No payment for stored material will be made if it is anticipated that the material will be incorporated into the work within 30 days of the written request. Only end product manufactured material or fully fabricated products that are awaiting installation or incorporation into the finished work are eligible for prepayment. Components, elements, or ingredients of a finished product are not eligible for prepayment.
- (d) Material for which an allowance is requested shall be stored in an approved manner in areas within the State of Maryland where damage is not likely to occur. If any of the stored materials are lost or become damaged in any manner, the Contractor shall be responsible for repairing or replacing the damaged materials. The value of the lost or damaged material will be deducted from the Contractor's subsequent estimates until replacement has been accomplished. The request for allowances for any materials stored on private property within the State of Maryland shall be accompanied by a release from the owner and/or tenant of such property agreeing to permit the removal of the materials from the property at no cost to the Administration. The material shall be clearly marked with the Administration's contract number on individual units. If the material is normally shipped to the project in bundles or other forms of packaging, the Administration's contract number shall be clearly marked or affixed to the package. When the material is not stored at the actual project site, the material shall be physically

separated by fencing or equivalent barrier from other materials stored at the same site. The material shall be accessible to the Administration at all times.

When it is considered impractical to store materials on the actual project, the Engineer may approve storage areas in the vicinity of the actual project which will be considered at the project site.

When storage of the materials within the State of Maryland is not practical, approval shall be obtained from the District Engineer for storage elsewhere. Storage of materials outside the State of Maryland will be subject to the conditions set forth in this provision and limited to materials exceeding twenty-five thousand dollars (\$25,000), which are designed and fabricated exclusively for use on a specific project.

- (e) Material for which payment has been made either wholly or partially shall not be removed from the approved location until such time that it is to be incorporated into the work unless authorized by the Engineer.
- (f) The Contractor shall submit a written request for payment to the District Engineer at least two weeks prior to the estimate cutoff date established by the District Engineer. The following items shall accompany the written request for payment:
  - (1) Consent of surety specifying the material type and the item(s) in which the material is to be used.
  - (2) Validated invoices with the signature of an officer of the company supplying the material showing actual cost.
  - (3) A notarized statement from the Contractor attesting that the invoices as submitted do not include charges or fees for placing, handling, erecting, or any other charges or markups other than the actual material cost, sales tax(es), if applicable, and freight charges.
  - (4) Bills of lading showing delivery of the material. The request for allowances for any materials stored on property outside the State of Maryland shall be accompanied by a release from the owner or tenant of such property agreeing to permit verification by the Inspector that the material is stored at the approved location, and to permit the removal of the materials from the property at no cost to the Administration.
  - (5) Inspection test reports, certifications and/or a written statement from the Inspector attesting to the inspection and approval of the material. Upon receipt of the above by the District Engineer and verification by the Inspector that the material is stored at the approved location, the District Engineer will authorize payment.
  - (6) A statement explaining why the material can not be stored on the project, if the Contractor is requesting to store material at a location other than the project site. The statement shall include the methods of storage, separation, and identification to be used by the Contractor. The Contractor shall provide a method of inventory control and withdrawal, which is satisfactory to the Administration, and shall be used by the Contractor to monitor materials not stored on the project.

- (7) A breakdown of the contract line item bid unit price showing the relationship of the cost of the stored material to the costs of all other materials, labor, and components of the work included in the contract line item unit price bid by the Contractor.

Upon receipt of the above by the District Engineer and verification by the Inspector that the material is stored at the approved location, the District Engineer will authorize payment.

The Contractor shall pay the material provider the amount shown on the invoice within 10 days of receipt of payment from the Administration. Evidence of payment shall be provided to the Administration. Failure to make invoice payments as specified will be cause to deduct the monies from future estimates and/or deny future stored materials payment requests.

Copies of all pertinent data shall be made by the Contractor and distributed to the Inspector for retention as part of the documented records for the project.

### TC-7.03 FORCE ACCOUNT WORK

When the Contractor is required to perform work as a result of changes to the contract for which there are no applicable unit prices in the contract, the Engineer and the Contractor shall make every effort to come to an agreed price for the performance of such work. If an agreement cannot be reached, the Engineer may, in writing, order the work done on a Force Account basis, to be compensated in accordance with the following:

- (a) **Labor.** For all labor and for foremen in direct charge of the specific operations, the Contractor shall receive the rate of wage agreed upon in writing before beginning work for each and every hour that said labor and foremen are actually engaged in such work, to which cost shall be added an amount equal to the percentage of the sum shown below. No additional allowance will be considered for Bond, insurance, taxes, or other fringe benefits.

Highway Contracts.....	65%
Utility Contracts.....	75%

- (b) **Materials.** For materials accepted by the Engineer and used for the work, the Contractor shall receive the actual cost of such materials delivered to the site. This cost includes transportation charges paid by him, exclusive of machinery rentals, to which cost shall be added an amount equal to twenty percent (20%) plus the prevailing Maryland State sales tax.

- (c) **Subcontractors.**

- (1) When an item of work is performed on a Force Account basis by a subcontractor who is approved for this work by the Engineer, an amount equal to 10 percent (10%) of the total cost shall be added to the final payment for such Force Account work.
- (2) The amount of compensation thus realized by the additional 10 percent (10%) of the cost of the work performed shall be considered as full compensation to the Prime Contractor for the administration of the work performed by the subcontractor under the Force Account basis.

(3) No additional compensation will be allowed unless the contract embraces work requiring the use of particular trades or specialty subcontractors to do the work. The assignment of work from one Contractor to another to equalize their workloads does not qualify the Contractor to whom the work has been assigned as a subcontractor under the intent of these specifications.

(d) **Equipment.** For any machinery or special equipment approved for us (other than small tools), including fuel and lubricants, the Contractor shall receive the rental rates and operating cost agreed upon in writing before such work is begun for the actual time such equipment is authorized on the work. The rental rate and operating cost, including fuel and lubricant but excluding operators, shall be the current rates from the Rental Blue Book for the Construction Equipment and/or the Rental Blue Book for the Older Construction Equipment both published by Primedia.

(1) Rental rate shall be based on the weekly rate converted into hours.  
To compute hourly rate, use:

8 hours per day  
40 hours per week  
176 hours per month

(2) Both rental rate and operating rate will be subject to area adjustment per the Rental Rate Blue Book for Construction Equipment and/or The Rental Rate Blue Book for Older Construction Equipment. No other allowances or additions will be paid.

(3) Rental rate will be applied to both idle time and operating time authorized. Operating rate will be applied to operating time only.

(e) **Superintendence.** No additional allowance shall be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

(f) **Compensation.** The compensation as set forth above shall be received by the Contractor as payment in full for extra work done on a Force Account basis. At the end of each day, the Contractor's representative and Inspector shall compare records of the cost of work as ordered on a Force Account basis.

(g) **Statements.**

No payment will be made for work performed on a force account basis until the Contractor furnishes the Engineer duplicate itemized statements of the cost of such force account work detailed as to the following:

- (1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman;
- (2) Designation, dates, daily hours, total hours, rental rate and extension for each unit of machinery and equipment;

- (3) Quantities of materials, prices and extensions;
- (4) Transportation of materials;
- (5) Payments of items under (g)(1) shall be accomplished by copies of certified payrolls. Under (g)(2) original receipted invoices for rentals must be provided if requested by the procurement officer. Paragraphs (g)(3) and (g)(4) shall be accompanied by original receipted invoices for materials used and transportation charges. If, however, the materials used in the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the original invoices the statements shall contain or be accompanied by an affidavit of the Contractor which shall certify that such materials were taken from his stock, that the quantity claimed was actually used and that the price and transportation of the material as claimed represent actual cost. Any request for payment under this Section shall be submitted in the order outlined by the above.

#### TC-7.04 SCOPE OF PAYMENT

- (a) Payments to the Contractor will be made for the actual quantities of contract items performed in accordance with the Plans and Specifications and if, upon completion of the construction, these actual quantities show either an increase or decrease from the quantities given in the bid schedule, the contract unit prices will still prevail, except as provided in GP-4.04 or contract modifications.
- (b) After the work is completed and before Final Payment is made, the Engineer shall make final measurements for all items of work, other than those paid by lump sum, to determine the quantities of various items of work performed as the basis for final settlement. In case of unit price items, the Contractor will be paid, in accordance with these Specifications, for the actual amount of work performed and for actual amount of materials in place as shown by the final measurements. All work completed under the contract shall be measured by the Engineer according to the standards of weights and measures recognized by the National Institute of Standards and Technology.
- (c) Except as herein provided, the Contractor shall accept the compensation as herein provided:
  - 1. In full payment for furnishing all materials, lab, or tools equipment and incidentals necessary to the completed work and for performing all work contemplated and embraced under the contract;
  - 2. For all loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work and until its final acceptance by the Engineer;
  - 3. For all risks of every description connected with the prosecution of the work; and
  - 4. For all expenses incurred in consequence of the suspension of the work as herein authorized.

- (d) Where the "Basis of Payment" clauses in the Specifications relating to any unit price in the bid schedule require that the said unit price cover, and be considered, compensation for certain work or material essential to the item, this same work or material shall not also be measured or paid for under any other pay item which may appear elsewhere in the Specifications.
- (e) The payment of any partial estimate or of any retained percentage except by and under the approved final estimate and voucher, in no way shall affect the obligation of the Contractor to repair or renew any defective parts of the construction or to be responsible for all damages due to such defects.

#### TC-7.05 PROGRESS PAYMENTS

##### (a) Current Estimates.

- (1) **Lump Sum Contracts.** If requested by the Administration, the Contractor shall furnish an acceptable breakdown of the lump sum contract price showing the amount included therein for each principal category of the work. Said breakdown shall be in such detail so as to provide a basis for estimating monthly progress payments.
- (2) **Monthly Estimates.** Each month the Administration will pay the Contractor for the contract value of the work satisfactorily performed during the preceding calendar month, including authorized extras and additions less 5 percent. The 5 percent of the total contract value retained by the Administration will not be released until final payment (unless partially released in a semi-final payment). Current estimates will be based upon the procurement officer's estimate of quantity (including materials and/or equipment complete in place) satisfactorily performed. In the instance of lump sum items, the procurement officer's estimate shall be the proper fraction of the lump sum items satisfactorily performed during the preceding month. All quantities, estimates, and fractions will be reasonably accurate approximations and are subject to correction (a) in subsequent current estimates, (b) in any semi-final estimate and, (c) in final payment. Any and/or all partial payments may be withheld in the event current requirements of the Specifications have not been complied with by the Contractor. Should either the procurement officer or the Contractor be of the opinion that any estimates, quantities and/or fractions (either as to an individual current estimate or accumulations thereof) do not represent a reasonably accurate approximation of actual work, then details questioned shall be reviewed and then any corrections adjusted for in the next current estimate.

**Deferred Monthly Payment.** Should the amount(s) due the Contractor for any one month be less than Five Hundred dollars (\$500.00), payment will be deferred until such time as the amount(s) due the Contractor under subsequent estimates, combined with that month for which the amount(s) due was less than \$500.00, shall equal Five Hundred dollars (\$500.00) or more.

##### (b) Semi-Final Estimate Payments.

- (1) Upon completion of the project and the acceptance by the Administration of the project for maintenance, the Administration, at the Contractor's request and with

consent of surety, will pay the Contractor, within 45 calendar days of said request, what is hereby known as a semi-final estimate payment. Such a semi-final estimate payment will be based upon (a) quantities the Administration has computed and set up as proposed final quantities and (b) a reasonably accurate estimate for those quantities for which the Administration has not yet completed computations. The quantities, which the Administration sets forth as proposed final quantities, shall be so designated. To arrive at the amount of semi-final estimate payment there shall be deducted from the apparent estimated value of the contract (a) total of all amounts previously paid to the Contractor as current estimates and (b) sums deemed chargeable against the Contractor properly deductible, including liquidated damages, and as a retainage, and an amount equal to 2 percent of the total value or \$2,000.00, whichever is greater.

- (2) In cases where there has been substantial completion of the project and there are remaining only inconsequential or minor work items such as painting, seeding, mulching, or planting to be completed and such items cannot be completed for an extended period of time because of seasonal or weather conditions, here shall be made a semi-final inspection and if the work completed is found by the Administration to be satisfactory, then there is deemed to be partial acceptance on the entire project except for the uncompleted work items. Upon the above referred to partial acceptance, the Administration, within 45 days from such partial acceptance, upon request of the Contractor and with consent of surety, shall pay to the Contractor, what is hereby known as a partial semi-final estimate payment. Such a semi-final estimate payment will be based upon (a) quantities the Administration has computed and set up as proposed final quantities and (b) a reasonably accurate estimate for those quantities for which the Administration has not yet completed computations. The quantities, which the Administration sets forth as proposed final quantities, shall be so designated. To arrive at the amount of semi-final estimate payment, there shall be deducted from the apparent estimated value of the contract (a) total of all amounts previously paid to the Contractor as current estimates, and (b) sums deemed chargeable against the Contractor properly deductible, including liquidated damages, and as a retainage, a sum equal to 2 percent of the total value of the contract. [Said retainage is not to be less than Two Thousand dollars (\$2,000)].

#### **TC-7.06 FINAL ACCEPTANCE AND FINAL PAYMENT**

- (a) When the Contractor has completed a contract, and it has been accepted for maintenance in accordance with the provisions of GP-5.13, the Engineer will promptly proceed:
- (1) To make any necessary final surveys;
  - (2) To complete any necessary computation of quantities; and
  - (3) To submit to the Contractor, within 60 days after final completion and acceptance of the project by the procurement officer for maintenance, for his consideration, a tabulation of the proposed final quantities. This tabulation shall be accompanied by a statement setting forth: (a) the additional work performed under change orders and/or supplemental agreements; (b) the authorized

extension of time; (c) the number of days which have been charged against the Contractor as having been used to complete the contract, and (d) any deductions, charges or liquidated damages which have been made or imposed.

- (b) The Contractor shall then have a period of 20 calendar days, dating from the date upon which he received the aforementioned tabulation from the Engineer, in which:
- (1) To decide whether or not he will accept final payment upon such a basis, and
  - (2) To notify the Engineer, in writing, of his decision. The Contractor may request an additional period up to 10 calendar days in which to notify the Engineer of his decision. In the event, the Contractor notifies the Engineer that he protests final payment on such a basis, that notification shall outline the reason(s) for said protest.
- (c) Upon receipt of a notification of acceptance as provided for in paragraph (b) above (or in the event of no response), the County shall prepare the Final Estimate and Final Payment Forms and submit the Final Payment check to the Contractor. Such action by the County shall be deemed to constitute acceptance and final payment.
- (d) If, under the provisions of paragraph (b) above, the Contractor notifies the Engineer of his protest and non-acceptance of the data submitted to him, the Engineer shall pay the Contractor a semi-final estimate, or an additional semi-final estimate in the event a semi-final estimate has already been paid based upon the data noted in paragraph (a) above, with deductions for all prior payments. A retainage equal to 1.5 percent of the total value of the contract shall be withheld by the Engineer. The acceptance of such semi-final estimate, or additional semi-final estimate, shall not be considered as a waiver on the part of the Contractor of his right to pursue his protest and press for acceptance and final payment.
- (e) In the event the Contractor does not accept the data submitted to him as described in paragraph (a) above and/or has outstanding a claim filed in accordance with GP-5.14, the procurement officer and the Contractor shall confer at mutually convenient times and endeavor to reconcile all points of disagreement expeditiously. If such reconciliation is accomplished, the Engineer will promptly proceed with acceptance and final payment on the reconciled basis and in accordance with the provisions of paragraph (c) above. If reconciliation is not accomplished within 30 days, the decision of the Engineer shall be submitted to the Director of Public Works as a dispute for arbitration in accordance with GP-5.15 Disputes.
- (f) All prior partial estimates and payments shall be subject to correction at the time of acceptance and final payment and if the Contractor has been previously overpaid, the amount of such overpayment shall be set forth in the Final Payment forms and the Contractor hereby agrees that he will reimburse the Administration for such overpayment within six months of receipt of such advice, and his surety will not be granted release from obligations under the terms of the contract until reimbursement has been made in full. It is further agreed that the County can withhold the overpayment from other accounts due and payable to the Contractor.

- (g) Payment for the full apparent value of the contract thus determined shall become due and payable to the Contractor within ninety (90) days after acceptance of the project by the procurement officer for maintenance, as hereinafter provided. Contractor's acceptance of final payment shall be considered a general release of all claims against the County arising out of, or in any way connected with, this contract.

**TC-7.07 LATE PAYMENTS**

Notwithstanding any other provision in this contract, the Contractor hereby waives the right to predecision interest.

**TC-7.08 ELIMINATED ITEMS**

Should any contract items contained in the Invitation for Bids be found unnecessary for the proper completion of the work contracted, the Engineer may, upon written order to the Contractor, eliminate such contract items from the contract and no allowance will be made for items so eliminated in making final payment to the Contractor except for material costs incurred prior to notification of the elimination of the items.

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CATEGORY 100  
PRELIMINARY

SECTION 104 — MAINTENANCE OF TRAFFIC

104.00 - GENERAL

On page 149 of the Standard Specifications.

**INSERT:** The following after the second paragraph.

If it is necessary to close a road to facilitate a work activity, the Contractor shall request a road closure by first contacting the appropriate project manager, as listed on the plans, to request the closure. If approved, the Contractor must submit a detour plan a minimum three weeks before the road is to be closed.

Two-way traffic shall be maintained at all times, using flaggers to control alternating directions if necessary. A minimum ten (10) foot travel lane is required at all times.

Provisions shall be made for safe maintenance of pedestrian and bicycle traffic, subject to approval of the County Inspector.

Sidewalks must be properly signed as being closed and alternate pedestrian crossing must be provided and maintained at all times. If a sidewalk is to remain open after a work activity, it must be filled with a temporary passable fill material, which has been approved by the Inspector prior to the Contractor being able to use said material to maintain pedestrian walkways. Removal of this fill material will be incidental to the installation of the sidewalk or maintenance of traffic for a particular work assignment.

Access shall be maintained to all driveways unless permission for closure is granted by the property owner/manager. However, accessibility for emergency vehicles shall be maintained at all times.

An arrowboard shall be used for every lane closure of more than fifteen (15) minutes duration and shall be placed as in the approved TCP.

**All Contractor vehicles** stopped in the travel way shall have four-way flashers, and prominently mounted yellow strobe lights for no more than fifteen (15) minutes.

No hazardous materials or equipment shall be stored within public right-of-way.

Pavement excavation shall be limited to a maximum of half the roadway surface at any time.

Reflectorized traffic drums shall be placed on the traffic side of any excavation and at the ends of trenches in intervals not to exceed 10 feet.

Excavated materials shall be stored on the furthest side of the roadway from moving traffic whenever possible.

All excavation(s) in the roadway shall be paved to level grade or plated before the end of any day's work and the roadway reopened to its full cross-section.

If the roadway is plated, "STEEL PLATES AHEAD" signs shall be placed approximately 250 feet in advance of any steel plates. Plated excavations will remain plated until the excavation is paved to level grade.

If it is necessary to restrict parking to facilitate a work activity, it is the Contractor's responsibility to take appropriate steps that are necessary to restrict parking.

## **104.01 TRAFFIC CONTROL PLAN (TCP)**

### **104.01.01 DESCRIPTION.**

On page 150 of the Standard Specifications.

**INSERT:** The following after the section's last paragraph.

#### **Work Restrictions.**

Work performed under this Contract shall normally be done between sunrise and sunset. No work involving lane closure or other roadway occupation that reduces traffic capacity, shall be performed between 06:30 to 09:00 hours and 15:30 to 18:30 hours of any weekday. Full traffic carrying capacity shall be restored at the end of each workday. (In the event that the Contractor may be required to work during non-work times or non-work week days, the Engineer may grant a specific exceptions to the permitted work times.)

No work shall be permitted, in or out of the travel way, on Saturdays, Sundays, or County Holidays, except as specifically authorized by the Engineer.

Work is not permitted on the holidays indicated below:

- New Year's Day, January 1
- Memorial Day, the last Monday in May
- Independence Day, July 4
- Labor Day, the first Monday in September
- Thanksgiving Holiday, the fourth Thursday and the fourth Friday in November
- Christmas Day, December 25

When **accelerated work, critical work, emergency work or night work** requires immediate execution, prior verbal consent to work on the otherwise prohibited days or time of day may be requested of the Engineer by the Contractor.

When a temporary lane or shoulder closure is in effect, work shall begin within one hour after the lane is closed. Any delay greater than one hour with no work in progress shall require the Contractor to remove the lane closure at no additional cost to the Administration. The Contractor's Traffic Manager shall attend Pre-Construction and Pre-Paving Meetings, if necessary, and shall discuss traffic control and the Traffic Control Plan including procedures to be implemented for lane closures for the Contractor's traffic signal construction.

All lane closures shall be in conformance with the approved TCP and under the direction of the Contractor's Traffic Manager and the Engineer.

The Engineer has the authority to select which TCP is to be implemented and/or modified as deemed necessary. The Inspector has the authority to order the Contractor to stop work and vacate the public right-of-way if the appropriate work zone traffic controls are not in compliance with an approved TCP.

Temporary lane or shoulder closures shall be restored at the end of the closure period and no travel lane shall be reduced to less than 10 feet. Before opening the closed lane or shoulder, the Contractor shall clear the lane or shoulder of all material, equipment, and debris.

Failure to restore full traffic capacity within the time specified will result in a deduction being assessed on the bill submitted for payment in conformance with the following chart and is in addition to the requirements specified in TC-4.02.

ELAPSED TIME, MINUTES	DEDUCTION
1 - 5	\$ 50.00
Over 5	\$ 50.00 per Minute (In addition to the Original 5 minutes)

### Work on State Maintain Roadways

Work assignments which require the Contractor to work on or adjacent to a state maintained roadway must contact the SHA District 4 Traffic office at 410-321-2780 for the work restrictions and required TCP of the SHA. MOT on SHA roadways must adhere to the current MOT policies of SHA. No additional compensation will be given for MOT on SHA maintained roadways and will be paid for under the items as bid in this Contract.

### 104.01.04 MEASUREMENT AND PAYMENT

**DELETE:** In its entirety.

**INSERT:** the following:

(a) Method 1 – **Minor** Maintenance of Traffic

**Minor** Maintenance of Traffic will be paid for at a fixed price of \$500 per each assigned task and will be full compensation for all material, labor, equipment, tools, and incidentals necessary to for the maintenance traffic.

This item will be paid for all other roadways in the County not listed as an arterial roadway in this section (see below).

(b) Method 2 – **Major** Maintenance of Traffic

**Major** Maintenance of Traffic will be paid for at a fixed price of \$1000 per each assigned task and will be full compensation for all material, labor, equipment, tools, and incidentals necessary for the maintenance traffic.

This item will be paid for roadways classified as **arterial roadways** in this section (see the list below for Baltimore County). All Maryland State Highways will be considered arterial roadways. Additional roads may be added at the discretion of the Engineer.

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**ARTERIAL ROADWAYS**


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Academy Rd	German Hill Rd	Merritt Ave	Rossville Blvd
Allegheny Ave	Glynowings Dr	Merritt Blvd	Ruxton Rd
Back River Neck Rd	Golden Ring Rd	Merrymans Mill Rd	S Marlyn Ave
Bellona Ave	Goucher Blvd	Middle River Rd	Seminary Ave
Bloomsbury Ave	Graces Quarters Rd	Middleborough Rd	Shawan Rd
Bosley Ave	Greenspring Ave	Milford Mill Rd	Shawan Rd
Bosley Rd	Hammonds Ferry Rd	Monkton Rd	Silver Spring Rd
Bowleys Quarters Rd	Hazelwood Ave	Mt Carmel Rd	Slade Ave
Bradshaw Rd	Hillen Rd	N Marlyn Ave	Smith Ave
Brenbrook Dr	Hillendale Heights Rd	Nicodemus Rd	Sollers Point Rd
Burke Ave	Hillsway Ave	North Point Rd	Stemmers Run Rd
Campbell Blvd	Holabird Ave	Old Bosley Rd	Stevenson La
Carroll Island Rd	Hollins Ferry Rd	Old Court Rd	Sulphur Spring Rd
Central Ave	Honeygo Blvd	Old Harford Rd	Taylor Ave
Chesaco Ave	Ingleside Ave	Owings Mills Blvd	Timber Grove Rd
Church Rd	Johnnycake Rd	Padonia Rd	Timonium Rd
Cowenton Ave	Joppa Rd	Painters Mill Rd	Towsontown Blvd
Cromwell Bridge Rd	Kenwood Ave	Paradise Ave	Trumps Mill Rd
Crosby Rd	Klausmier Rd	Patterson Ave	Tufton Ave
Daisy Ave	Knecht Ave	Peninsula Expwy	Virginia Ave
Delvale Ave	Lake Ave	Pennsylvania Ave	Walker Ave
Dolfield Blvd	Lansdowne Rd	Perry Hall Blvd	Waltham Woods Rd
Dundalk Ave	Leeds Ave	Pot Spring Rd	Waltham Blvd
E Cherry Hill Rd	Lillian Holt Dr	Proctor La	Warren Rd
Ebenezer Rd	Lyons Mill Rd	Providence Rd	Winands Rd
Edmondson Ave	Mace Ave	Putty Hill Ave	Windsor Mill Rd
Fairmount Ave	Maiden Choice La	Radecke Ave	
Forest Park Ave	Marriottsville Rd	Red Run Blvd	
Franklin Blvd	McClellan Blvd	Rolling Rd	
Fullerton Ave	McDonogh Rd	Rolling Rd	

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**NOTE:** Additional roadways may be added at the discretion of the Engineer.

**CATEGORY 100  
PRELIMINARY**

**SECTION 107 CONSTRUCTION STAKEOUT**

On page 188 of the Standard Specifications.

**INSERT**: After the first paragraph.

**107.03.10 TRAFFIC SIGNAL CONSTRUCTION STAKEOUT**

After the notice to proceed for installation of Traffic Control Devices, the Contractor shall arrange a meeting with the Engineer to stake out all items indicated on the sketches, plans, and in the Special Provisions before any work assignment begins. Any dimensional or quantity changes resulting from the stakeout shall not be designated or indicated as a change order, or a cause for increase in time for work assignment completion as stated in the Contract Documents.

**107.04 MEASUREMENT AND PAYMENT.**

**INSERT**: After the first paragraph.

**Intersection Utility Stakeout.** Intersection Utility Stakeout for Traffic Control Devices will not be measured but the cost will be incidental to other pertinent items specified in the Contract Documents. (refer to Special Provisions – Category 875 - UTILITY CONNECTIONS AND UTILITY STAKEOUT)

**CATEGORY 200  
GRADING**

**SECTION 205 TEST PIT EXCAVATION**

**205.04 MEASUREMENT AND PAYMENT.**

On page 219 of the Standard Specifications.

**DELETE:** In its entirety.

**INSERT:** The following.

**Test Pit Excavation (Outside Roadway)**

Test Pit Excavation (Outside Roadway) will be measured and paid for at the Contract unit price per cubic yard for the material actually removed from within the limits specified. The payment will be full compensation for all material, labor equipment, tools and incidentals necessary to complete the work. Tamped backfill will not be measured, but will be incidental to the Contract unit price per cubic yard for Test Pit Excavation.

**Test Pit Excavation (In Roadway)**

Test Pit Excavation (In Roadway) will be measured and paid for at the Contract unit price per cubic yard for the material actually removed from within the limits specified. The payment will be full compensation for all material, labor equipment, tools and incidentals necessary to complete the work. Tamped backfill in roadway will be required to meet the requirements for subbase compaction and any pavement to be replaced must meet the existing pavement cross section. The tamped backfill and any pavement to be replaced will not be measured, but will be incidental to the Contract unit price per cubic yard for Test Pit Excavation.

**CATEGORY 200  
GRADING**

**SECTION 206 - REMOVAL OF EXISTING PAVEMENT,  
SIDEWALK, PAVED DITCHES, CURB OR COMBINATION  
CURB AND GUTTER, AND MONOLITHIC MEDIAN**

On page 219 of the Standard Specifications.

**206.01 DESCRIPTION**

**CHANGE:** In the third line the words "curb or combination curb and gutter" to read "curb, combination curb and gutter, or monolithic median".

**206.03 CONSTRUCTION**

**CHANGE:** In the second line, these words "curb or combination curb and gutter" to read "curb, combination curb and gutter or monolithic median".

**206.03.01 BROKEN MATERIAL**

**CHANGE:** In the second line, the words "curb or combination curb and gutter" to read "curb, combination curb and gutter or monolithic median".

**206.04 MEASUREMENT AND PAYMENT**

**DELETE:** In its entirety.

**INSERT:** The following:

The payment for the items listed below will be full compensation for all work specified regardless of the type or depth of the material removed and for all labor, equipment, tools, and incidentals necessary to complete the work.

**Remove Existing Curb and Gutter** will be measured and paid per linear foot.

**Remove Existing Sidewalk** will be measured and paid per square foot.

**Remove Existing Monolithic Median less than 4** will be measured and paid per linear foot.

These payment items will only be measured and paid for if that item which was removed is not being replaced by the that same item.

**CATEGORY 500  
PAVING**

**SECTION 550 — NONTOXIC WATERBORNE PAVEMENT  
MARKING PAINTS**

**550.01 DESCRIPTION.** This work shall consist of furnishing and applying Nontoxic Waterborne Pavement Marking Paints (fast-dry, 60-second no-track) to pavement surfaces as specified in the Contract Documents or as directed by the Engineer.

**550.02 MATERIALS.**

Nontoxic Waterborne Pavement Marking Paints

951.01

All nontoxic waterborne pavement marking paints shall be approved by the National Transportation Product Evaluation Program (NTPEP) Northeast regional facility.

**550.03 CONSTRUCTION.**

**550.03.01 Application.** The location, width, and type of marking shall be as specified in the Contract Documents, or as directed by the Engineer.

- (a) The paint shall be applied when the ambient and pavement surface temperatures are in conformance with the manufacturer's recommendations, and when relative humidity levels will assure the 60-second no-track requirement.

Pavement surfaces shall be dry and free of glaze, oil, dirt, grease, and other contaminants prior to application of pavement markings. Surfaces not conforming to these requirements shall be cleaned by the Contractor to a width equal to 2 in. wider than the width of the marking to be applied.

At the discretion of the Engineer, existing pavement markings shall be cleaned or removed prior to retracing with new markings.

- (b) Existing pavement markings which conflict with new or altered traffic patterns shall be completely removed from the surface of the pavement. The Contractor's method of removal shall not damage the pavement surface and shall be as approved by the Engineer. Any damage incurred shall be the responsibility of the Contractor to repair and/or replace the pavement at no additional cost to the Administration.

- (c) Applying pavement markings over longitudinal joints is prohibited unless absolutely necessary for symmetry, uniformity, and continuity of the marking layout. They shall preferably be offset 2 in. from longitudinal construction joints.

- (d) The paints shall be reflectorized for night visibility by the addition of reflective beads which are applied into the surface of the wet paint by the pressurized method before the paint dries and sets.
- (e) Waterborne paint markings applied to new bituminous asphalt surfaces shall be reapplied once the first application is fully cured. Footage counters will be allowed to record both applications.
- (f) The Contractor shall protect the markings until dry by placing guards or warning devices as approved by the Engineer and in conformance with the Manual on Uniform Traffic Control Devices (MUTCD). In the event that the wet marking is damaged by a crossing vehicle, the marking shall be reapplied. Marks left on the pavement by the vehicle shall be removed by the Contractor at no additional cost to the Administration. For pavements in service, the Contractor will be permitted to close only one lane of traffic at a time.
- (g) The Contractor shall remove and dispose of all empty containers and other debris related to the striping operations from the project site.

**550.03.02 Formulation Selection.** The Contractor shall select, purchase, and apply paint from an approved list of formulations conforming to these Specifications, which is maintained by the Administration's Office of Materials and Technology for the current list of prequalified materials. The current approved paint list is located elsewhere in this Contract.

**550.03.03 Reflective Beads.** The Contractor shall apply reflective beads uniformly across the surface of the stripe at the rate of 7 to 9 lb/gal of paint. For the majority of the striping season, a 50/50 BLEND of large and standard reflective beads will be required. At the onset of winter, and/or at the discretion of the Engineer, the use of the 50/50 BLEND may be terminated until such time as the district's snow plowing responsibilities are over.

**550.03.04 Thickness.** When the 50/50 BLEND of reflective beads is used, the paint shall be applied at a wet film thickness of 18  $\nabla$ 1 mil. When standard beads are used alone, the paint shall be applied at a wet film thickness of 14  $\nabla$ 1 mil. Material usage will be tracked by the Administration, and when compared to distance striped, a five-inch line should yield approximately 214 ft/gal for the 50/50 BLEND, or 257 ft/gal for standard beads. Low yields will be considered sufficient cause for restriping.

**550.03.05 Dry Time.** The applied paint shall dry to a no-track condition within 60 seconds.

The no-track time shall not be exceeded when the ambient and pavement temperatures are between 40 and 120 F, and the relative humidity is less than 80%, providing the pavement is dry. The no-track time shall be determined by passing over the applied line at approximately 30 degrees with a standard passenger car or pickup truck. When viewed from a distance of 50 ft, the pavement surface shall show no evidence of the paint being picked up and redeposited on the pavement by the vehicle.

**550.03.06 Retroreflectance.** Retroreflectance shall be determined using a retroreflectometer supplied by the Contractor. The instrument shall have a geometry of illumination angle of 86.5 degrees and an observation angle of 1.5 degrees. The instrument shall be standardized daily in conformance with the manufacturer's recommendations.

At the time of the paint application, the minimum retroreflectance values shall be 250 and 150 millicandellas/lux/square meter for white and yellow, respectively.

**550.03.07 Field Test Strip.** Before beginning work each day or when changing colors, the Contractor shall place a minimum of 200 ft of paint for a test strip at a location specified by the Engineer. The test strip will be evaluated by the Engineer for distribution and bonding of beads, thickness of paint stripe, retroreflectance, and dry time as specified in MSMT 729.

The Contractor will be authorized to proceed only if the markings on the test strip conform to the specified criteria.

**550.03.08 Equipment.** The equipment used for application of the paint shall be capable of applying waterborne traffic paint which has been approved by the Administration.

The Contractor shall provide access to the paint application equipment for inspection by the Engineer. The equipment shall be approved by the Engineer prior to start of work.

The paint carriage on the left side of the paint truck shall have four paint guns and three bead guns. The paint carriage on the right side of the paint truck shall have two paint guns and two bead guns. All paint guns shall be equipped with material spray shrouds.

All 10 in. lines shall be applied using two paint guns and two bead guns. The Contractor shall not be permitted to raise the paint carriage in order to paint these lines with one paint gun and one bead gun.

The footage counter used to measure pavement markings shall be calibrated and a notarized certification shall be submitted to the Engineer prior to application.

**550.03.09 Quality Assurance/Quality Control (QA/QC).** The Contractor shall submit a proposed Quality Control Plan, according to Quality Control Plan Requirements, in writing to the Engineer for approval at least two weeks prior to the prestriping meeting. The Plan shall contain procedures for random sampling as specified in MSMT 729, and shall show how the Contractor proposes to control the equipment and material to ensure conformance with the Specifications. The Plan shall contain personnel qualifications, inspection and record keeping methods, and minimum frequencies of sampling and testing as specified in MSMT 729. The Plan shall also detail when and how corrective action will be taken for unsatisfactory striping practices and deviations from the material Specifications. Any deviations from the Quality Control Plan shall be cause for immediate shut down of striping operations, and a meeting with the Contractor's representative, the Administration's representative, and the

Statewide Pavement Marking Coordinator (or designee) will be required prior to re-start of striping.

- (a) Commencement. Striping operations shall begin only after approval of the Contractor's Quality Control Plan by the Engineer.
- (b) Technicians. Quality Control technicians shall have a current SHA qualification document card.
- (c) Records. The Contractor shall maintain complete records of actions taken to correct problems, and Quality Control inspection results, and shall submit copies to the Engineer daily. The Contractor shall identify where quality control tests were performed.
- (d) Quality Assurance. The Administration will provide Quality Assurance by:
  - (1) Conducting independent sampling and testing separate from the Contractor.
  - (2) Periodically observing tests performed by the Contractor.
  - (3) Directing the Contractor to take additional samples and/or perform additional tests at any time and at any location.
  - (4) Monitoring the Contractor's conformance with the Quality Control plan.

The Contractor shall provide SHA-qualified technicians for Quality Control testing. The technicians shall demonstrate to the Engineer that they have a thorough knowledge of sampling and testing procedures as specified in MSMT 729. Quality Control shall be performed during striping operations according to the approved Quality Control Plan. Only Administration- approved technicians will be permitted to obtain samples or perform tests.

**Quality Control test results shall be submitted to the Engineer at the end of each work day for that day's work.**

Should it be determined that a qualified technician has become delinquent in his or her duties (i.e.: failed to perform tests, failed to submit documents to the Engineer at the end of the day, or falsified results), the technician's qualifications shall become invalid and a resolution or requalification shall be required. All striping operations shall be suspended until such time as the Contractor provides a qualified replacement.

The Contractor's Quality Control Technician shall select a minimum of two sites per linear mile for each marking type (i.e.: yellow edgeline, white edgeline, skipline, turn lane line, etc.) for retroreflectance measurement. The technician shall mark the site locations for future reference. An average of five readings shall be taken at each site to determine conformance with these Specifications.

NOTE: Center skiplines on Expressway/Freeway routes are exempt from the retroreflectance measurement requirement, and shall be inspected visually at night.

Quality Assurance (QA) Testing performed by the Administration will assure that all markings on the project compare favorably with those obtained on the test strip, and will provide the basis for final acceptance.

Random Independent Assurance Audits (IAA) will be performed by the Administration's Office of Materials and Technology (OMT) to ensure the accuracy and accountability of both the Administration's and the Contractor's technicians and equipment.

**550.03.10 Observation Period.** The Contractor shall be responsible for any defects in materials and workmanship of the waterborne paint markings for a period of 60 days from the date the pavement is opened to traffic.

During the 60-day observation period, the waterborne pavement marking material shall show no signs of failure due to blistering, bleeding, crumbling, staining, discoloration, poor adhesion, or loss of reflectivity.

The Contractor will not be held responsible for waterborne paint markings damaged by snow removal equipment.

**550.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for furnishing and placing of all materials, and for all labor, equipment, tools, testing, pavement preparation, and incidentals necessary to complete the work.

Nontoxic Waterborne Pavement Marking Paint and the Removal of Existing Pavement Markings will be measured and paid for at the Contract unit price for one or more of the items listed below, unless otherwise specified in the Contract Documents.

- (a) Nontoxic Waterborne Pavement Marking Paint will be measured and paid for per striped linear foot for the color and width specified in the Contract Documents.
- (b) Removal of Existing Pavement Markings will be measured and paid for per striped linear foot, regardless of width.
- (c) Removal of Existing Pavement Marking Letters, Symbols, Arrows, and Numbers will be paid for per each.

**550.04.01 Removal, Replacement, or Corrective Actions.** Any additional cost for removal, including Maintenance of Traffic (M.O.T.) shall be the responsibility of the Contractor. In addition, the current road-users fee will be applied if traffic disruption occurs during corrective actions.

**CATEGORY 500  
PAVING**

**SECTION 553 — LEAD FREE REFLECTIVE THERMOPLASTIC  
PAVEMENT MARKINGS BY EXTRUDED METHOD**

**553.01 DESCRIPTION.** This work shall consist of the preparation and application of lead free reflective thermoplastic pavement markings to roadway surfaces as specified in the Contract Documents or as directed by the Engineer.

**553.02 MATERIALS.**

Lead Free Reflective Thermoplastic Pavement Markings 951.02

**553.03 CONSTRUCTION.**

**553.03.01 Quality Assurance/Quality Control.** The Contractor shall submit a proposed Quality Control Plan, according to the Quality Control Plan requirements, in writing to the Engineer and approved at least two weeks prior to the start of work and before the prestripping meeting. The plan shall contain procedures of random sampling as specified in MSMT 729 and shall show how the Contractor proposes to control the equipment and material to ensure conformance with the Specifications. The plan shall contain personnel qualifications, inspection and record keeping methods, and minimum frequencies of sampling and testing as specified in MSMT 729. The plan shall also detail when and how corrective action will be taken for unsatisfactory construction practices and deviations from the Specifications.

**(a) Placement.** The pavement marking placement operation shall not begin until the Engineer has approved the Quality Control Plan.

**(b) Technicians.** Quality control technicians shall have a current Administration qualification document that they can present to the Engineer.

**(c) Records.** The Contractor shall maintain complete records of quality control inspection results, as well as any action taken to correct problems, and shall submit copies to the Engineer daily.

**(d) Quality Assurance.** The Administration will provide quality assurance by:

(1) Conducting independent sampling and testing separate from the Contractor.

(2) Periodically observing testing performed by the Contractor.

(3) Directing the Contractor to take additional samples at any time and at any location.

(4) Monitoring the Contractor's conformance with the Quality Control Plan.

**Qualified Technicians.** The Contractor shall provide Administration qualified technicians for quality control testing. The technicians shall demonstrate to the Engineer that they have a thorough knowledge of sampling and testing procedures as specified in MSMT 729. Quality control shall be performed during

striping operations according to the approved Quality Control Plan. The Contractor shall identify where quality control tests were performed. Any deviations from the Quality Control Plan shall be cause for immediate suspension of the striping operations and a meeting will be required prior to re-start of striping. Only Contractor's Technicians qualified by the Administration shall be permitted to obtain samples or perform tests. Quality control test results shall be submitted to the Engineer at the end of each work day for that day's work. Should a qualified technician become delinquent in their duties (i.e., failed to have all the proper test equipment on the site, or has failed to perform tests, or failed to submit documents to the Engineer at the end of the day, or reported information that varies substantially from the Administration's results), then the technician's qualification shall become invalid and the technician shall be replaced with another approved qualified technician.

Testing performed by the Administration will provide the basis for final acceptance.

Independent Assurance Sampling and Testing (IAST) will be performed by the Administration to assure that all markings on the project compare favorably with those obtained on the test strip.

**553.03.02 Application Equipment.** An oil or air jacketed kettle shall be utilized for uniform melting and heating of the thermoplastic material. The kettle shall provide continuous mixing and agitation of the material. The kettle and the applicator shall be equipped with an automatic thermostatic device to provide positive temperature control.

The equipment shall be constructed so that all mixing and conveying parts, up to and including the application apparatus, maintains the material at the specified temperature. Conveying parts of the applicator between the reservoir and the application apparatus shall be constructed to prevent clogging and accumulation. The applicator shall be capable of containing a minimum of 200 lb. of molten thermoplastic material.

The kettle and applicator shall be constructed and arranged to conform to the requirements of the National Board of Fire Underwriters (NBFU), the National Fire Protection Association (NFPA), and State and local authorities.

Temperature gauges shall be calibrated every six months and a copy of the calibration certification shall be submitted to the Engineer.

The applicator shall apply the surface dressing beads to the molten thermoplastic marking by means of a bead dispenser or other mechanical conveying method dependent upon gravity for uniform application. The bead dispenser shall be equipped with an automatic cutoff system for the thermoplastic material so that all markings placed shall be covered with a uniform layer of surface dressing beads.

Application equipment shall be capable of applying the markings at multiple width settings ranging from 4 to 12 in. as specified in the Contract Documents.

The applicator shall provide a method for cleanly cutting off stripe ends and shall be capable of applying all longitudinal pavement markings.

The equipment shall be mobile and maneuverable to the extent that straight lines can be followed and all standard curves can be made in true arcs.

All parts of the equipment shall be thoroughly cleaned of foreign material or different colored material prior to the introduction of a new batch of thermoplastic material.

**553.03.03 Cleaning Pavement Surfaces.** Pavement surfaces shall be dry and free of oil, dirt, grease and other contaminants prior to application of pavement markings. Surfaces not in conformance with these Specifications shall be cleaned by the Contractor to a width 4 to 6 in. wider than the marking to be applied.

Existing pavement markings which conflict with new or altered traffic patterns shall be completely removed. The Contractor's method of removal shall not damage the pavement surface and shall be as approved by the Engineer. Any pavement damage incurred shall be repaired or replaced by the Contractor at no additional cost to the Administration.

**553.03.04 Application.** The ambient and surface temperatures shall be at least 50 F and rising at the time of application.

Applying pavement markings over longitudinal joints is prohibited.

Thermoplastic pavement markings shall be extruded onto the pavement surface. Only the extruded method of application shall be permitted.

Thermoplastic pavement markings shall conform to the following:

- (a) **Temperature.** The molten material temperature shall be between 400 and 440 F unless otherwise recommended by the manufacturer.
- (b) **Primer.** A primer shall be used if thermoplastic is applied to portland cement concrete. Any primer used shall be compatible with the thermoplastic material.
- (c) **Thickness.** The pavement markings shall yield a solid thickness range of 80 to 95 mils above the roadway surface across the middle two-thirds of the line width when tested as specified in MSMT 729. Variation from this range will be used for the price adjustment specified in 553.04.01.
- (d) **Glass Beads.** Glass beads shall be uniformly applied to the surface of the molten thermoplastic at the minimum rate of 7 to 9 lb/100 ft<sup>2</sup>, as specified in MSMT 729.
- (e) **Color.** The color of the dry markings shall match Federal Standard 595 (13538 - yellow or 17886 - white) when demonstrated visually by the Contractor with the color chip specified, as determined by the Engineer.
- (f) **Retroreflectance.** The in-place retroreflectance of the pavement markings shall equal or exceed the millicandellas/lux/square meter values shown in the following table. These are minimum values anytime within the first 30 days. The retroreflectance of the pavement markings shall be determined using a certified calibrated 15 m geometry retroreflectometer

supplied by the Contractor and tested as specified in MSMT 729. An average of five readings shall be used at each site to determine conformance with these Specifications and as specified in MSMT 729. The instrument shall be standardized daily in conformance with the manufacturer's recommendations.

#### MINIMUM RETROREFLECTANCE

COLOR	RETROREFLECTIVITY	CORRECTIVE ACTION
White	equal to or greater than 250	None
Yellow	equal to or greater than 150	
White	less than 250	Necessary corrective actions, including grinding if necessary, and re-tracing
Yellow	less than 150	

**(g) Width.** The traveled way lane widths and the width of longitudinal lines shall be as specified in the Contract Documents. Lane widths shall be measured from the center line of the traveled way. When measurements are taken from existing longitudinal lines, the point of reference shall be the center of the line or the center of the space between dual lines. The proposed traveled way lane widths shall be in compliance when they have an acceptable appearance and do not deviate more than 2 in. from the proposed lane width.

**(h) Alignment.** Markings shall be placed in a straight and uniform manner. The lane line width shall be in compliance when it is visually in alignment and has an acceptable appearance and varies by no more than 3/8 in. in any 40 ft section of traveled way.

Longitudinal alignment shall be maintained through all intersections and breaks, even though the lines themselves will discontinue.

Noncompliance during striping operations shall be just cause to suspend the operation. A meeting shall be held to review the Quality Control Plan to assure that continued operations will be in compliance. Areas of noncompliance will be identified by the Engineer and correction of alignment will be as defined in the Quality Control Plan. Any incorrect markings shall be completely removed by corrective actions.

**(i) Layout Markings.** Any layout markings which detract from the overall appearance or function of the final markings as determined by the Engineer shall be removed by the Contractor at no additional cost to the Administration.

**553.03.05 Quality Control Test Strip.** Before beginning work with each color, the Contractor shall place a 200 to 300 ft cumulative quality control test strip, that

conforms to Specifications at a location to be determined by the Engineer. Authorization to proceed will be given when the Engineer determines that the quality control test strip conforms to the Contract Documents.

**553.03.06 Responsibility.** The Contractor shall protect the markings until dry by placing warning devices as specified in the Manual on Uniform Traffic Control Devices (MUTCD) and as approved by the Engineer. In the event that the uncured marking is crossed by a vehicle, the marking shall be reapplied. Marks left on the pavement by the vehicle shall be removed by the Contractor at no additional cost to the Administration.

**553.03.07 Observation Period.** The Contractor shall be responsible for any defects in materials and workmanship of the thermoplastic markings for a period of 180 days from the date the pavement is opened to traffic.

During the 180 day observation period, the thermoplastic pavement marking material shall show no signs of failure due to blistering, excessive cracking, bleeding, staining, discoloration, oil content of the pavement materials, smearing or spreading under heat, deterioration due to contact with grease deposits, oil, diesel fuel, or gasoline drippings, chipping, spalling, poor adhesion to the pavement materials, and loss of reflectivity,

A minimum of 95 percent of the applied markings shall remain intact during the observation period as determined by the Engineer.

When required, removal of pavement markings shall be performed by the Contractor with no damage to the pavement surface. Any damage incurred shall be the responsibility of the Contractor to repair or replace the pavement surface as determined by the Engineer.

**553.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for all materials, labor, equipment, tools, testing, pavement preparation, and incidentals necessary to complete the work.

Lead Free Reflective Thermoplastic Pavement Markings and the Removal of Existing Pavement Markings will be measured and paid for at the Contract unit price for one or more of the items listed below, unless otherwise specified in the Contract Documents.

- (a) Lead Free Reflective Thermoplastic Pavement Markings will be measured and paid for per striped linear foot for the color and width specified in the Contract Documents.
- (b) The Removal of Existing Markings associated with the installation of the Reflective Thermoplastic Pavement Markings shall be paid for separately as specified in the Special Provisions Section 558 of the Contract Documents.

**553.04.01 Price Adjustment for Film Thickness.** The unit price for Lead Free Reflective Thermoplastic Pavement Markings will be per striped linear foot based on MSMT 729 calculations for thickness, and will be adjusted in conformance with the following table:

MIL THICKNESS	PERCENT OF PAYMENT - UNIT PRICE
80 – 95 mils	100
75 – 79 mils	90
70 – 74 mils	88
65 – 69 mils	82
60 – 64 mils	72
Less than 60 mils	Retrace to achieve a thickness of 80 to 95 mils. Retrace thickness shall be 30 mils min.

Note 1: The Engineer may require the Contractor to remove excess material thickness.

Note 2: Removal of excess material and retracing pavement markings shall be performed at no additional cost to the Administration.

**553.04.02 Removal, Replacement, or Corrective Actions.** Any additional cost (including M.O.T.) for the removal of markings which are incorrectly or inaccurately installed shall be at no additional cost to the Administration. In addition, the current road users fee will be applied since traffic disruption occurs during corrective actions.

**CATEGORY 500  
PAVING****SECTION 556 HEAT APPLIED PERMANENT PREFORMED  
THERMOPLASTIC PAVEMENT MARKINGS**

**556.01 DESCRIPTION.** This work shall consist of furnishing and installing heat applied permanent preformed thermoplastic pavement markings as specified in the Contract Documents or as directed by the Engineer.

**556.02 MATERIALS.**

Thermoplastic Material

951.06

**556.03 CONSTRUCTION.**

**Application.** Permanent preformed thermoplastic pavement markings shall be applied to clean and dry hot mix asphalt (HMA), open-grade friction courses (OGFC), stone matrix asphalt (SMA) or portland cement concrete (PCC) pavements using a propane fueled heat gun in conformance with manufacturer's recommendations. The markings shall be capable of being applied at a minimum pavement and ambient temperature of 32 F. When specified by the manufacturer, a primer or sealer shall be used when applying the markings to portland cement concrete pavements.

**Packaging.** The material shall be handled for shipping, unloading and storage as recommended by the manufacturer. Each shipping package shall be marked with the following information:

- (a) Manufacturer's name.
- (b) Description of item.
- (c) Date of manufacture.
- (d) Contractor's name.
- (e) Purchase order number.
- (f) Lot number.
- (g) Color.

Place line markings in the same direction as the flow of traffic. No line marking over longitudinal joints shall be permitted.

**Retroreflectance.** The in-place retroreflectance shall meet or exceed the values shown in Table 1. The retroreflectance of the pavement marking shall be determined using a calibrated retroreflectometer certified and supplied by the Contractor. Five readings shall be taken at each of a minimum of five random locations and the results averaged to determine conformance.

**TABLE 1  
MINIMUM INITIAL REFLECTANCE**

SPECIFICATION	WHITE	YELLOW
Entrance Angle, Degrees	86.5	86.5
Observation Angle, Degrees	1.5	1.5
Specific Luminance, mcd/m <sup>2</sup> /lux	250	150

**Quality Assurance/Quality Control.** The Contractor shall perform quality control sampling and testing and maintain appropriate records. The Contractor shall release the information upon the Engineer's request, and relinquish all records to the Engineer upon completion of the work.

The Administration will perform quality assurance sampling and testing. Measurement and testing performed by the Administration will provide the basis for final acceptance of the construction phase. The Contractor shall be required to remove and correct any deviations of the materials and/or pavement markings, symbols, etc., greater than specified in these provisions or pavement marking plan at no cost to the Administration.

#### **556.04 MEASUREMENT AND PAYMENT.**

Heat applied permanent preformed Thermoplastic pavement markings will be measured and paid for as follows:

**Furnish and Install Thermoplastic Pavement Markings – Letter or Number – per each**

**Furnish and Install Thermoplastic Pavement Markings – Arrow or Symbol – per each**

The payment will be full compensation for the sealers, primers, delivery, unloading, storage, and all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 500  
PAVING**

**SECTION 557 REMOVABLE PREFORMED  
PAVEMENT MARKINGS**

**557.01 DESCRIPTION.** This work shall consist of furnishing and installing removable preformed reflective pavement markings on pavement surfaces. These materials include line marking tape and preformed letters, numbers, arrows and symbols.

**557.02 MATERIALS.**

Removable Preformed Pavement Marking Material 951.03 or as approved by the Office of Materials and Research.

**557.03 CONSTRUCTION.** Removable preformed pavement markings shall be applied in conformance with these Specifications, as specified in the Contract Documents and in conformance with the manufacturer's recommendations. Sizes and dimensions shall be as specified in the Contract Documents.

Before the application of the markings, the pavement surface shall be clean, dry and free of all contaminants, including curing compound, loose particles and dirt. Existing residual pavement markings shall be completely removed.

Markings shall be applied to newly paved surfaces before traffic is permitted on the pavement.

Line markings shall be applied in the same direction as the flow of traffic. Applying line markings over existing markings or longitudinal joints is prohibited.

**557.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for all materials, labor, equipment, tools and incidentals necessary to complete the work.

**Furnishing and Installing Removable Preformed Line Markings (Yellow or White)** will be measured and paid for per linear foot for the color and width specified in the Contract Documents.

The Removal of Existing Markings associated with the installation of the Removable Preformed Line Markings shall be paid for separately as specified in the Special Provisions Section 558 of the Contract Documents.

**CATEGORY 500  
PAVING****SECTION 558 REMOVAL OF EXISTING PAVEMENT MARKINGS**

**558.01 DESCRIPTION.** This work shall consist of removal of existing pavement markings on pavement surfaces. This work will include removal of any type or width of line marking and the removal of any type of letters, numbers, arrows, and symbols.

**558.02 MATERIALS.** Not Applicable

**558.03 CONSTRUCTION.**

Removal of existing pavement markings shall be accomplished by the Contractor using equipment and methods specifically approved by the Engineer.

Markings shall not be removed by "painting out" with black paint nor shall it result in excessive scarring of the pavement. No more 3/8-inch depth of scarred pavement will be allowed.

Any damage to the pavement or pavement joint materials caused by the removal of existing pavement markings on pavement surfaces shall be repaired by the Contractor at no cost to the County by methods specifically approved by the Engineer.

Whenever using the approved method for the removal of existing pavement markings on pavement surfaces, the work shall be conducted in such a manner that the finished pavement surface is not damaged or left in a traffic pattern that will mislead or misdirect the motorists. When these operations are completed, the markings shall be cleaned to remove residue or debris resulting from the cleaning work.

The Contractor shall be responsible for sweeping and adequately cleaning up of any debris after completion of the markings removal.

At least 90 percent (90%) of painted markings shall be removed. For plastic markings removal and removable preformed pavement markings, 100 percent (100%) of the marking shall be removed.

Improperly placed markings, incorrect markings installed, or markings that fail during construction, within a 90 day observation period, and/or the warranty period shall be 100 percent (100%) removed by the Contractor at no cost to the County and reinstalled properly as directed by the Engineer.

Unless permitted by the Engineer, where existing markings are removed, the new markings must be reapplied the same day as the existing markings are removed. Failure to meet these requirements may result in assessment of one day Liquidated Damages for each calendar day the markings have not been replaced.

**558.04. MEASUREMENT AND PAYMENT.**

Removal of Existing Pavement Markings will be measured after the markings have been satisfactorily removed and accepted by the Engineer and are paid as follows:

**Remove Existing Pavement Markings – Any Type or Width** -- per linear foot

**Remove Existing Pavement Markings- Arrow or Letter** -- per each

The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 600  
SHOUDLERS**

**SECTION 603 - SIDEWALKS**

**603.04 MEASUREMENT AND PAYMENT**

On page 513 of the Standard Specifications.

**DELETE:** 603.04 In its Entitety

**INSERT:** The Following:

**603.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for all excavation, backfill, disposal of excess or unsuitable material, forms, reinforcement when specified, joints, sealer, compaction, curing, finishing, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. The removal and disposal of unsuitable material will be measured and paid for at the Contract unit price for Class 2 Excavation, which price shall include the cost of using suitable excavation as replacement material. When Borrow or Selected Backfill is authorized as replacement material, payment will be made at the Contract unit price bid for the respective items.

**603.04.01** Concrete Sidewalks will be measured and paid for at the Contract unit price per square foot of finished surface.

When the existing sidewalk is removed and replaced with a new sidewalk, the cost to remove the existing sidewalk will be incidental to the Contract unit price for sidewalk.

**603.04.02** Hot Mix Asphalt Sidewalks will be measured and paid for at the Contract unit price per ton for the mixture placed.

**603.04.03 Concrete Sidewalk for a Handicap Ramps** will be measured and paid for at the Contract unit price per square foot of finished surface.

When the existing sidewalk is removed and replaced with a new concrete sidewalk for a handicap ramp, the cost to remove the existing sidewalk will be incidental to the Contract unit price for the new concrete sidewalk for a handicap ramp. (Note: all new handicap ramps shall include detectable warning surfaces-see section 610).

**CATEGORY 600  
SHOUDLERS**

**SECTION 610-DETECTABLE WARNING SURFACES**

**610.01 DESCRIPTION.** This work shall consist of furnishing and installing detectable warning surfaces as specified in the Contract Documents or as directed by the Engineer. The detectable warning surface shall conform to the most recent accessibility guidelines of the Americans with Disabilities Act(ADA).

**610.02 MATERIALS.** The detectable warning surface material shall be approved by the Engineer prior to use on a project. The Contractor shall submit the proposed source of supply and specific product to the Engineer for approval.

**610.03 CONSTRUCTION.** The detectable warning system shall be either surface applied or cast in place. The Contractor shall install the system in conformance with the manufacturer's recommendation.

**610.04 MEASUREMENT AND PAYMENT.** The detectable warning surface will be measured and paid for at the Contract unit price per square foot. The payment will be full compensation for furnishing, installing, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

The sidewalk on which the detectable warning surface is placed shall be measured and paid for at the Contract price for the pertinent sidewalk item.

**CATEGORY 800  
TRAFFIC**

**SECTION 801 CONCRETE FOUNDATIONS**

**801.02 MATERIALS.**

On page 568 of the Standard Specifications.

**CHANGE:** In the second line the wording "Concrete Mix No. 2" to read "Concrete Mix No. 6"

**801.04 MEASUREMENT AND PAYMENT**

On page 569 of the Standard Specifications.

**ADD:** After the second paragraph.

Concrete for cabinet bases will paid for and be measured as follows:

NEMA Type 5 cabinet - 1.5 cubic yards of concrete as specified in detail MD 816.01.

NEMA Type 6 cabinet - 2.0 cubic yards of concrete as specified in detail MD 816.02.

**CATEGORY 800  
TRAFFIC**

**SECTION 804 — GROUNDING**

On page 571 of the Standard Specifications.

**804.01 DESCRIPTION.**

**ADD:** As the last sentence to the paragraph: " Grounding of overhead communication cable messenger cable attached to an utility company owned pole shall also conform to the utility company's requirements.

**804.03 CONSTRUCTION.**

**804.03.01 Equipment Grounding System**

**CHANGE:** In the last line the terminology "conduit system, grounding conductors, ground rods and terminations." to read "conduit system, span wire, steel poles, grounding conductors, communications cable steel spans, ground rods, steel span wire back guying, steel span wire pole to pole guying, and steel span wire slack spans and terminations."

**INSERT:** As the second paragraph.

Grounding for overhead communications cable shall be to all of the following when present: at the telephone and catv cables support span wires, at the ground wire of a multigrounded system, at the neutral wire of a multigrounded system, and at the ground of a secondary circuit with approved span wire grounding clamps. Grounding to the overhead communication cable support span at utility company owned poles shall be with a vise type body clamp equipped with jaws having teeth to pierce the insulation, without stripping the jacket on the overhead communications cable span wire, and operated by a single hexagonal head bolt.

**804.03.05 Terminations**

**INSERT:** After the first paragraph.

Overhead communication cable shall be made with connectors installed at the first attachment on a utility company owned pole in the following method: at the last attachment on the pole, at every fifth attachment between the first and last attachment on the pole, at each attachment where power, catv and

telephone cables continue onto differing poles, at each attachment where power catv and telephone cables converge onto the same pole, at attachments on poles equal to  $\frac{1}{4}$  mile or more and, at where more than one separate attachment or guy is on the same pole. Grounding connectors shall be installed to the overhead communications cable, to the telephone and catv cables support span wires when present, to the ground wire of a multigrounded system, to the neutral wire of a multigrounded system and to the ground of a secondary circuit. The ground wire between clamps shall be stapled every twelve (12) inches.

**CATEGORY 800  
TRAFFIC**

**SECTION 805 — ELECTRICAL CONDUIT AND  
FITTINGS**

On page 574 of the Standard Specifications

**805.03.10 Conduit Installation Under Existing Paved Areas (Bored).**

**INSERT:** The following after the first paragraph of section 805.03.10.

All conduit used for boring will be **Bore Duct.** If scheduled 80 polyvinyl chloride conduit (PVC) is to be used in place of the Bore Duct, the Contractor must first get written approval from the Engineer.

**805.03.11 Conduit Installation – Inside of Buildings.**

Conduits shall be installed at the direction of the Engineer or as specified on the construction drawings. EMT conduit will be used for this type work and shall be installed conforming to NEC requirements unless otherwise specified. Junction boxes will be used and are covered in Section 811.

**CATEGORY 800  
TRAFFIC**

**SECTION 807 — ELECTRICAL SERVICE  
EQUIPMENT**

On page 576 of the Standard Specifications

**807.03 CONSTRUCTION.**

**ADD:** The following as the second paragraph.

Where remote service equipment for lighting is specified on the Plans, the Contractor shall furnish and install a NEMA 3R rainproof enclosure; a 60 amp, 2 pole circuit breaker; a 60 amp, 2 pole electrically held lighting contactor; two 2 pole 20 amp circuit breakers for feeder circuits; photocell; attachment hardware for attaching the unit to a utility pole, wood post or sign structure; and all incidentals necessary to provide a complete lighting control unit. The completed unit shall be UL listed for a service entrance.

On page 578 of the Standard Specifications

**INSERT:** As the second paragraph.

**807.04.06** A two (2) inch to four inch adapter for underground electrical services will not be measured and the cost shall be incidental to the contract unit price for furnishing and installing control and distribution equipment as specified in the Contract Documents.

**CATEGORY 800  
TRAFFIC**

**SECTION 809 — TRENCHING AND BACKFILLING**

On page 581 of the Standard Specifications

**809.03 CONSTRUCTION.**

**CHANGE:** In the first paragraph second line the wording "CAUTION: SHA ELECTRICAL LINE BURIED BELOW" to read " CAUTION: BALT. CO TRAFFIC ELECTRICAL LINE BURIED BELOW 410-887-8601 ".

**CATEGORY 800  
TRAFFIC**

**SECTION 810 - ELECTRICAL CABLE, WIRE,  
AND CONNECTORS**

On page 583 of the Standard Specifications.

**ADD:** After 810.03.09 Micro-Loop Probes.

**810.03.10 Communication Cable.** Communication cable shall be installed into wood poles and in steel poles, traffic signal cabinets, signal structures, conduits and steel span wire rings as specified in the Contract Documents.

Where shown on the plans, overhead communication cable shall be installed on utility owned poles with an attachment suspension clamp. The Contractor shall arrange a pre-installation meeting before the proposed attachment work begins on the utility owned pole with the utility pole owner representative(s), the Inspector and the Engineer. In addition, the Contractor shall arrange a post-installation/verification inspection, after completion of an attachment, on the utility owned pole with the utility pole owner representative(s), the Inspector and the Engineer.

Attachments to utility owned poles shall be installed in accordance to the utility pole owner's requirements and as shown on the plans to a minimum of ten (10) feet below primary electrical cables or other facilities carrying 750 volts or more. A minimum communication cable vertical clearance of 25 feet shall be maintained above railroads and 18 feet for all other vertical clearances.

An angle attachment to utility owned pole shall have reinforcement strap. Attachment bolts to utility owned poles shall not project more than 1½ inches beyond the final attachment nut.

Overhead communication cable installed in steel poles, traffic signal cabinets, signal structures, conduits and steel span wire rings shall have the integral steel span wire removed without cuts or damage to the jacket surrounding the communication cable.

Dead end termination of overhead communication cable shall have the integral steel span wire exposed and terminated with a strandwise device for County work assignments only. If the work assignment is being done for SHA, then the latest and most current SHA specifications will be followed.

Vertical cable runs mounted on wood utility owned poles shall be installed in electrical conduit.

**810.03.11 Disconnect, Pullback & Reroute Cables.** Existing cables shall be manipulated as called for on the plans or as directed by the Engineer

**ADD:** After **810.03.04 Micro-Loop Probes.**

**810.04.04 Disconnect, Pullback & Reroute Cables** will be measured at the contract cost per linear foot and will be for one or as many cables as are rerouted(i.e. not per cable).

**CATEGORY 800  
TRAFFIC**

**SECTION 811 – ELECTRICAL HANDHOLES, MANHOLES, PULL AND  
JUNCTION BOXES**

On page 584 of the Standard Specifications.

**811.02.03 Pull and Junction Boxes.**

**ADD:** After Cast Iron.

16 –gauge steel, ANSI 61 gray polyester powder finish

On page 585 of the Standard Specifications.

**811.04 MEASUREMENT AND PAYMENT.**

**ADD:** As the second paragraph.

Pull Boxes and Junction Boxes can be any standard size from 4 inch x 4 inch x 4 inch to 12 inch x 12 inch x 6 inch. They will be measured and paid for furnishing and install the pull box or junction box (any size) at the Contract unit price per each. The payment will be full compensation for all hardware for the conduit connections, all hardware for the mounting of the junction box, and for all labor equipment, tools, and incidentals to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 813 - SIGNS**

On page 586 of the Standard Specifications.

**813.02 MATERIALS.**

ADD: The following after the Materials list.

The Contractor shall supply a square tube sign post for ground mounted signs with the following specifications:

**The Post**

The post is ten (10) foot in length and be 2 inches by 2 inches square.  
The post is made of 14 gauge steel that meets ASTM A653 and FHWA approval.

The post is hot dipped galvanized zinc coating conforming to coating designation G-90.

The post meets all requirements for NCHRP 350.

The post has 7/16 inch holes punched 1 (one) inch on center on all four sides 48 inches from the top and 12 inches up from the bottom.

The post must have a strength of 2.42 lbs./foot.

**The Anchor**

The anchor is three (3) foot in length and be 2-1/4 inches by 2-1/4 inches square.

The anchor is made of 14 gauge steel that meets ASTM A653 and FHWA approval.

The anchor is hot dipped galvanized zinc coating conforming to coating designation G-90.

The anchor meets all requirements for NCHRP 350.

The anchor has 7/16 inch holes punched 1 (one) inch on center on all four sides.

The bottom of the anchor must have a v-pointed bottom on two of the four sides. On two of parallel sides, the anchor should be cut on a 45 degree angle one inch up from the bottom.

The anchor must have a strength of 2.77 lbs./foot.

The Contractor must also supply all associated hardware necessary to install the posts and signs on this type of square tube sign post.

**CATEGORY 800  
TRAFFIC**

**SECTION 814 – SIGNAL HEADS**

On page 587 of the Standard Specifications.

**814.03 CONSTRUCTION.**

**ADD:** The following after the first paragraph.

**Relocating Existing Signal Head (Any Type).** Existing signal heads shall be relocated as specified on the signal drawings or as directed the Engineer. This work shall include relocating a signal head from its original location to the new location, which shall include aiming, and adjusting of the signal head.

**814.04 MEASUREMENT AND PAYMENT.**

**DELETE:** In its entirety

**INSERT:** The following:

The installation of new Light Emitting Diode (L.E.D) units which may replace the lens and light bulb of one or more sections of the traffic signal head will not be compensated for and will incidental to the items in this section. The L.E.D. will be supplied by the County and is to be installed in the signal head(s) as per the plans and/or as directed by the Engineer.

The Contractor will be supplied with the L.E.D. units and will be responsible for any damage to unit. If the Contractor damages a unit, it will be the Contractor's responsibility to replace the L.E.D. unit at the Contractor's expense with the same make, model and vendor of the original L.E.D. unit supplied by the County.

**814.04.01 Furnished and Installed Signal Heads.**

Aluminum, Polycarbonate, and Optically Programmed Signal Heads and Pedestrian Signal Indications furnished and installed will be measured and paid for at the Contract unit price per each section of signal head type and size as specified in the Contract Documents. The payment will be full compensation for all lenses, mounting hardware, assembly, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**814.04.02 Installed Signal Heads.**

Aluminum, Polycarbonate, and Optically Programmed Signal Heads and Pedestrian Signal Indications (to include audible pedestrian signals) installed will be measured and paid for at the Contract unit price per each section of signal head type and size as specified in the Contract Documents. The payment will be full compensation for transportation, mounting, assembly, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**814.04.03 Relocating Existing Signal Head (Any Type).**

This work will be measured and paid for at the Contract unit price per each. The payment will be full compensation for relocating the existing signal head assembly and for all materials, equipment, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 816 – TRAFFIC SIGNAL CONTROLLERS AND CABINETS**

On page 589 of the Standard Specifications.

**816.03.02 Pole Mounted Traffic Signal Controllers.**

**INSERT:** The following after the first paragraph.

Pole mounted cabinets shall be mounted 27 inches above grade.

NEMA Type 5 cabinets will have a 3 inch LB installed in the conduit run from the bottom of the cabinet to the pole.

A pole mounted cabinet will be mounted to the pole with two (2) -  $\frac{3}{4}$  inch type 201 stainless steel attachment straps per mounting bracket.

**CATEGORY 800  
TRAFFIC**

**SECTION 817 - PUSH BUTTON AND PUSH BUTTON SIGNS**

On page 590 of the Standard Specifications.

**817.01 DESCRIPTION.**

**ADD:** The following sentence to end of first paragraph.

In addition, work may consist of installing County furnished pedestrian push button assemblies and push button signs at locations specified in the Contract Documents.

On page 591 of the Standard Specifications.

**817.04 MEASUREMENT AND PAYMENT.**

**DELETE:** In its entirety

**INSERT:** The following:

**817.04.01** Furnishing and Installation of Push Button and Push Button Sign will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all drilling of holes, mounting hardware, sign, labor, equipment, tools, and incidentals necessary to complete the work.

**817.04.02** Installation of County supplied Push Button Assembly and Push Button Sign will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all drilling of holes, mounting hardware, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 819 STEEL SPAN WIRE**

**819.01 DESCRIPTION.**

On page 592 of the Standard Specifications.

**CHANGE:** In the second line the terminology "signal head or sign mountings, interconnect runs, or for tethering purposes" to read "signal head or sign mountings, interconnect runs, backguying, overhead communications cable pole to pole guying, overhead communications cable slack, spans overhead communications cable, false dead ends or for tethering purposes"

**819.03 CONSTRUCTION.**

On page 592 of the Standard Specifications.

**CHANGE:** In the first line the terminology "The span wire shall be attached to poles" to read "The span wire shall be attached to signal structures".

**ADD:** After the third paragraph: "Overhead communications cable steel span wire back guying, pole to pole guying, false dead ending and slack spans shall be installed on all utility owned poles in accordance with the utility pole owner's requirements. Ram head type guy hooks shall be installed for overhead communications cable steel span wire back guying, pole to pole guying, false dead ending and slack spans on all utility owned poles. Wrap type guy grips shall be used to terminate the ends of overhead communications cable steel span wire back guying, pole to pole guying, false dead ending and slack spans. Strandvise devices shall not be used to terminate the steel span wire ends of overhead communications cable steel span wire back guying, pole to pole guying, false dead ending and slack spans."

**CATEGORY 800  
TRAFFIC****SECTION 820—GENERAL ELECTRICAL WORK AND TESTING**

On page 595 of the Standard Specifications.

**820.03.03 Traffic Signal Testing.**

ADD: After the fourth paragraph.

**820.03.05 CONTINUITY OF OPERATION**

During the modification and/or interconnection of existing traffic signals or signal systems, the Contractor shall take every precaution to assure that disturbance of the normal signal operation is minimized. Also, the Contractor shall submit to the Engineer a Schedule of Construction Staging and shall obtain approval before performing any modification work. The Schedule of Construction Staging shall describe the sequence of events by which the continuity of signal operation will be preserved when transferring from the existing to the new equipment. At no time will the entire signal be turned off without prior approval of the Engineer. The Contractor shall not make any changes in the operational functioning, phasing, or timing of any traffic signal without written direction to do so by the Engineer.

**820.03.06 TURN-ON AND TESTING PROCEDURE**

Under the direct supervision of the Engineer, the Contractor shall follow the procedures listed below when activating traffic signal equipment.

**New Installations:**

After installation of a new traffic signal, the Contractor shall activate the traffic control signal by:

- (1) testing the total operation of the signal equipment
- (2) placing the signal on flashing operation for an introductory period of not less than seventy-two (72) hours; then
- (3) placing the signal on standard color operation in the presence of the Engineer. Local controller timings and daily program shall be provided by the Engineer and implemented by County Forces.

**Modified Installations:**

At locations where existing traffic control signals have been modified, the new equipment should be tested (as far as possible) without colors showing to traffic. The old equipment shall be retained in place and operational until it is reasonably certain that the new equipment will perform. The transfer to the new system shall be performed in the presence of the Engineer during off-peak traffic periods, and should be coordinated with a gap in the traffic. The switchover from the old to the new equipment should be conducted without letting the signals go dark. If conflicting indications could result during the switch over, a brief period of flashing operation should be used. Testing of the new equipment shall then be completed with the system fully operational. The old signal equipment shall be retained on-site and operational until the Engineer directs removal.

**CATEGORY 800  
TRAFFIC**

**SECTION 822 - REMOVE AND RELOCATE EXISTING  
SIGNS AND SIGN STRUCTURES**

On page 597 of the Standard Specifications.

**DELETE:** In its entirety

**INSERT:** The following.

**822.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for removing and relocating existing signs and sign structures, removing existing concrete foundations, backfilling and compacting existing holes left after sign removal and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**822.04.01 Remove Existing Sign (any size and/or type)** will be measured and paid for at the Contract unit price per each. Removal of sign, sign supports, and concrete foundations will not be measured but the cost will be incidental to the Contract unit price for removing the sign(s).

This item will not be measured when the signs are to be removed as part of the item - Remove and Dispose of Existing Signal Equipment per Assignment.

**822.04.02 Relocate Existing Sign (any size and/or type)** will be measured and paid for at the Contract unit price per each. Removal and disposal, or removal and relocation of the sign support will not be measured but the cost will be incidental to the Contract unit price for relocating the sign(s).

**CATEGORY 800  
TRAFFIC**

**SECTION 823 - REMOVE AND RELOCATE OR DISPOSAL  
OF ROADWAY LIGHTING STRUCTURES**

On page 598 of the Standard Specifications.

**DELETE:** In its entirety

**INSERT:** The following:

**823.04 MEASUREMENT AND PAYMENT.**

**823.04.01 Remove and Dispose of Roadway Lighting** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for the removal and disposal of the lighting structure and fixture, removal of existing concrete foundation and all material, labor, equipment, tools, and incidental necessary to complete the work.

**823.04.02 Remove and Relocate Roadway Lighting Structure** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for the removal, storage, reinstallation, connection to existing lighting circuits, removal of existing concrete foundation and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC****SECTION - 826 CATALOG CUTS AND WORKING DRAWINGS**

**DESCRIPTION.** This work shall consist of the Contractor preparing and transmitting submittals to demonstrate the performance of the work will be in accordance with the Contract Documents. Submittal schedules, catalog cuts, shop drawings, installation methods, manufacturer's certifications, photometric data and working drawings shall be furnished on all Contractor furnished items for highway signing, sign lighting, highway lighting and traffic signals. Stakeouts of the sign locations shall be submitted for all sign structure locations as specified in the Contract Documents.

**MATERIALS.** Not Applicable.

**CONSTRUCTION.**

**SUBMITTAL REQUIREMENTS.** Submittals shall be scheduled and coordinated with the Contractor's construction schedule. A complete submittal schedule and list of required submittals shall be submitted with the first submittal, but no later than two weeks after the letter of award. The schedule for submission of submittals shall be arranged so that related equipment items are submitted concurrently. If the Contractor is unable to complete the requirements of this Special Provision within three (3) months from the letter of award will be withdrawn.

The Engineer may require changes to the submittal schedule to permit concurrent review of related equipment. Shop drawings for closely related items such as a sign and its support structures shall be submitted together.

**SUBMITTAL DOCUMENTS.** Contractor's drawings shall be neat in appearance, legible and explicit to enable proper review to ensure Contract compliance. They shall be complete and detailed to show fabrication, assembly and installation details, wiring and control diagrams, catalog data, pamphlets, descriptive literature, and performance and test data. They shall be accompanied by calculations or other sufficient information to provide a comprehensive description of the structure, machine, or system provided and its intended manner of use. If the Contractor's drawings deviate from the Contract Documents, the Contractor shall so advise the Engineer in writing with the submittal and state the reason therefor.

No portion of the work requiring a Contractor's drawing shall be started nor shall any materials be fabricated, delivered to the site, or installed prior to the approval or qualified approval of such item. Fabrication performed, materials purchased or on-site construction accomplished, which does not conform to approved Contractor's drawings, shall be at the Contractor's risk. The County will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

Shop drawings shall show types, sizes, accessories, layouts including plans, elevations and sectional views, component, assembly and installation details, and all other information required to illustrate how applicable portions of the Contract requirements will be fabricated and installed. In case of fixed mechanical and electrical equipment, layout drawings, drawn to scale, shall be submitted to show required clearances for operation, maintenance and replacement of parts. Manufacturer's certified performance curves, catalog cuts, pamphlets, descriptive literature, installation and application recommendations, shall be provided and indicate conformance to the Contract documents. Certifications shall be originals.

Manufacturer's catalog product and equipment data shall be certified and shall include materials type, performance characteristics, voltage, phase, capacity, and similar data. Provide wiring diagrams when applicable. Indicate catalog, model and serial numbers representing specified equipment. Provide complete component information to verify all specified required items. Installation recommendations and instructions shall provide written Manufacturer's detail step by step preparation and installation of the materials, and products including recommended tolerances and space for maintenance and operation.

Catalog cuts for sign luminaries shall have photometric data attached for each sign to be illuminated. Photometric printouts shall include the sign number, the illumination on a one foot grid covering the entire sign face, the average illumination, the maximum to minimum uniformity ratio, and a working drawing for the sign face attached.

Catalog cuts for roadway luminaries shall have a photometric data attached showing the initial illumination levels for a typical section of the project where luminaries will be installed. The printout shall be for a row of points between two of the luminaries spaced at twenty (20) foot along the center of each travel lane.

The Contractor shall submit working drawings as required for changes, substitutions, Contractor designed items, and Contractor designed methods of construction. Requirements for working drawings will be listed in appropriate Specification Sections and in Special Provisions. Drawings shall be accompanied by calculations or other information to completely explain the structure, machine or system described and its intended use. Review and approval of such drawings by the Engineer shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract.

Working drawings and calculations as submitted shall be sealed, dated and signed by a Professional Engineer registered in the State of Maryland.

The review and approval of Contractor's drawings by the Administration shall not relieve the Contractor from his responsibility with regard to the fulfillment of the terms of the Contract. The Contractor shall be responsible for the verification and accuracy of all dimensions and insuring that all Contractor furnished items are compatible, and conform to all design and performance criteria. All risks of error and omission are assumed by the Contractor and the Engineer will have no responsibility therefor.

**SUBMITTAL PROCESS.** Each Contractor's drawing submitted by the Contractor shall have affixed to it the following Certification Statement, signed by the Contractor:

"By this submittal, I hereby represent that I have determined and verified all field measurements, field construction criteria, materials, dimensions, catalog numbers and pertinent data and I have checked and coordinated each item with other applicable approved drawings and Contract requirements."

With the first submittal, submit a Contractor's drawing submittal schedule, listing by Specification Section number, all submittals required and approximate date submittal will be forwarded.

For original submittal and each subsequent resubmittal that may be required, submit seven (7) copies of catalog descriptions, shop drawings, working drawings, photometric data, manufacturer's certifications, method of construction and manufacturer's installation recommendations for approval to:

Mr. Greg Carski, Section Chief  
 Traffic Engineering Design Section  
 Baltimore County Government  
 111 West Chesapeake Avenue, Room 326  
 Towson, Maryland 21204

Each submittal shall have a transmittal page that indicates the Contractor's and Subcontractor's address and telephone numbers.

The first page of the first set of catalog description, working drawing and material certifications shall be stamped in red with the following (sets 2 to 7 may photocopied and must be legible photocopies of the first set). Submittals in packages of multiple items need the identification only on the exterior. In such instances the identification shall include page and catalog item numbers for items submitted for approval.

Baltimore County Bureau of Traffic Engineering and Transportation Planning	
SUBMITTAL PACKAGE # _____	DATED _____
SHA # _____	FAP # _____
ITEM # _____	THIS ITEM CONTAINS _____ PAGES
ITEM DESCRIPTION _____	
<input type="checkbox"/> ACCEPTED <input type="checkbox"/> ACCEPTED AS NOTED <input type="checkbox"/> REJECTED - REVISE & RESUBMIT	
REVIEWER'S NAME _____	DATE _____

All pertinent Contract Document information shall be filled in the spaces provided.

All submittals for approval shall have the following identification data, as applicable, contained thereon or permanently adhered thereto.

- (a) Drawing title, drawing number, revision number, and date of drawing and revision.
- (b) Applicable Contract Drawing Numbers and Specification Section and Paragraph Numbers.

The Contractor shall indicate the submittal package by sequential numbering, date of submittal, SHA Contract number, item number, item description and number of pages for each item submitted. Catalog, product data or brochure submittals containing various products, sizes and materials shall be underscored or highlighted to indicate the salient features required to meet the specifications. Likewise, items not applicable to the Contract shall be marked "not applicable" or crossed out.

If one or more of the items in such a submittal are not approved, resubmittal of only the unapproved items is required highlighted to show the particular item being submitted. Resubmittals shall bear the original submittal number and be lettered sequentially with each resubmittal.

Three (3) copies of all Contractor's submittals will be returned to the Contractor, (2) copies will be forwarded to the Traffic Signal Supervisor, one (1) copy will be kept by the Engineer, and one (1) copy will be filed in the Traffic Engineering Office files.

Each submittal shall be in accordance with the Contractor's drawings submission schedule. Allow thirty days for checking and appropriate action by the Engineer.

Contractor's drawings will be returned, marked with one of the following classifications:

**ACCEPTED:** no corrections, no marks

**ACCEPTED NOTED:** a few minor corrections. Resubmit a corrected copy to the Engineer.

Resubmit drawings as per original submission with corrections noted. Allow thirty days for checking and appropriate action by the Engineer.

**REJECTED - REVISE & RESUBMIT:** requires corrections or is otherwise not in accordance with the Contract documents. No items shall be fabricated. Correct and resubmit drawings as per original submission. Allow thirty days for checking and appropriate action by the Engineer.

**MEASUREMENT AND PAYMENT.** Catalog cuts, manufacturer's certifications, photometric data and working drawings will not be measured but the cost will be incidental to the pertinent items specified in the Contract Documents.

**CATEGORY 800  
TRAFFIC**

**SECTION 850 CUTTING, CLEANING, GALVANIZING AND  
CAPPING MAST ARM AND STRAIN POLES**

**DESCRIPTION.** This work shall consist of cutting, cleaning, galvanizing, and capping mast arms/poles and strain poles to the as specified in the Contract Documents.

**MATERIALS.**

Poles for Mast Arm(s)	-	As specified in the Contract Documents.
Mast Arm(s)	-	As specified in the Contract Documents.
Strain Pole(s)	-	As specified in the Contract Documents.

**CONSTRUCTION.**

- (a) **Strain Poles.** Strain Pole shall be sawcut as required. Affected area shall be cleaned inside and outside the pole with a wire brush and sprayed with cold galvanizing compound on the cleaned area and then a matching size pole cap shall be placed.
- (b) **Mast Arms and Poles.** Mast arm shall be sawcut to the required length. Affected area shall be cleaned inside and outside with a wire brush and sprayed with cold galvanizing compound on the cleaned area and then a matching size cap shall be placed.

**MEASUREMENT AND PAYMENT.** Cutting, cleaning, galvanizing, and capping of mast arms/poles will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 851 PAINTING NEW AND EXISTING STRUCTURES**

**DESCRIPTION.** This work shall consist of painting new and existing galvanized steel, stainless steel and aluminum structures including exposed anchor bolts, flange bolts, nuts, washers, stainless steel bands and conduits as specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.** Materials shall conform to any one of the following paint systems or as approved by the Engineer.

**Paint System:**

- (A) Spot Primer. Paint meeting the requirements of a zinc rich spot primer shall have a dry film thickness of 3 to 5 mils.
- (B) Prime Coat. Paint meeting the requirements of a two component polyamide epoxy shall have a dry film thickness of 4 to 6 mils.
- (C) Finish Coat. Paint meeting the requirements of a two component aliphatic polyurethane shall have a dry film thickness of 2 to 4 mils.

Materials shall conform to any one of the following paint systems:

	Manufacturer	Spot Primer	Prime Coat	Finish Coat
1.	Sherwin Williams	Zinc Clad B 69AHS	Tile Clad II Epoxy B62 Series/B60V70	H S Polyurethane B65 Series/B60V30
2.	Ameron	Amercoat 68 HS	Amercoat 385	Amercoat 450 HS
3.	Davis Frost	P-281	E-375	Shinethane HS
4.	Courtaulds Coatings	Interzinc 308	Interseal 670	Interthane 990
5.	Carboline	Carboline 858	Carboline Penetrating Sealer	Carboline 133 HB
6.	DuPont	Corlar Epoxy Zinc	Dual Build Epoxy	Imoron Polyurethane

(D) **Alternative finish systems as approved by the Engineer.**

**CONSTRUCTION.** The Painting Contractor shall be pre-qualified by the Administration's Office of Materials and Research to provide cleaning and painting of any structure.

The Contractor will be provided with the appropriate color information with the Notice To Proceed (NTP) for the task.

**Shop Painting.** Shop painting of new structures (less than six months old) shall conform to the following:

Structures shall be galvanized and protected from exposure to contaminants such as oil, salts, etc. during storage and/or transportation. The structures shall be brush blasted conforming to SSPC-SP7 no earlier than 12 hours before application of the first coat. Additional surface preparation and coating application shall be in accordance with manufacturer's recommendations. The finish coating shall be non-porous when checked with a holiday detector approved by the Engineer.

**Field Painting.** Field painting of existing structures (6 months or later) shall conform to the following:

All existing painted structures shall be cleaned to insure that all paint is removed to either galvanized surface or bare metal. Before painting, all cleaned surfaces shall be approved by the Office of Materials and Research.

- (a) Solvent cleaning conforming to SSPC-SP1 shall be used to remove foreign matter such as oil, grease, soil, and other contaminants from galvanized. In the solvent cleaning operations, the contaminated solvent shall be removed before it evaporates by wiping or rinsing with clean solvent to prevent leaving a film of contaminants spread over the surface.
- (b) Loose rust and paint shall be removed by either hand tool cleaning conforming to SSPC-SP2 or by power tool cleaning conforming to SSPC-SP3.
- (c) Spot primer shall be used on rusted areas cleaned to bare metal.

The contractor shall notify Mr. Gregory Carski at 410-887-3554 at least seven days prior to the cleaning and painting of any structures. Structures shall be painted within 24 hours after surface preparation. The finish coating shall be non-porous when checked with a holiday detector approved by the Engineer.

**MEASUREMENT AND PAYMENT.** Painting of new structures will be measured and paid for at the Contract unit price per each structure. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Painting and cleaning of existing structures will be measured and paid for at the contract unit price per each structure cleaned and painted. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 852 MAST ARMS AND MAST ARM POLES -  
SINGLE, TWIN AND TRIPLE**

**DESCRIPTION.** This work shall consist of furnishing and/or installing galvanized traffic signal mast arms and mast arm poles at locations specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.** Materials shall conform to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals except as noted. All welding shall conform to American Welding Society (AWS) Structural Welding Code D1.1 - Steel, Tubular Structures.

**Mast Arm(s) and Mast Arm Pole(s)**

Refer to MD SHA Details: 801.01, 818.01, 818.02, 818.03, 818.06, 818.07,  
818.08, 818.09, 818.10, 818.11, 818.12, 818.13,  
818.14, 818.19.

Note: A modified mast arm design is shown in MD SHA Detail 818.13 - 01 (modified) for use with low overhead utility clearances. This pole may be requested by the Engineer for use with any project. See Section 852 Measurement and Payment for payment for this modified Mast Arm Pole

Each mast arm(s) and mast arm pole structure furnished shall consist of a design from a steel pole shaft with a steel base plate and flange plate, steel mast arm shaft(s) with steel flange plate(s), four flange bolts per mast arm, four anchor bolts and miscellaneous hardware.

- (a) All mast arm poles shall be designed to support, at the free end of the mast arm, a minimum vertical downward dead load of 150 lbs. and a minimum horizontal wind load applied at a right angle to the mast arm of 700 lbs. Design stress for the mast arm pole and all its components shall not exceed 55 percent of yield strength of the material used, equivalent to a 1.8 factor of safety.
- (b) The mast arms and mast arm poles shall be manufactured from steel tubing conforming to ASTM A 595 Grade A or equal. Each mast arm and mast arm pole shall be fabricated of one length and shall have one

longitudinal weld, parallel to the long axis of the mast arm or mast arm pole, with no transverse welds. The longitudinal weld shall be finished to form a smooth outside surface and the wall of the mast arms and mast arm poles shall be of uniform thickness including the welded area. The mast arms and mast arm poles shall be round or multi-sided (8 sides or more) in cross section and be uniformly tapered from butt to tip with a 1 inch reduction in diameter for each 7 feet in length (0.14 in./ ft.). Mast arms shall be of a two piece design for all mast arms 50 foot and 60 foot in length. Mast arms shall be of a three piece design for all mast arms 70 foot in length. Any combination of two piece of 50 foot and 60 foot arms of the same butt diameter shall fit together and any combination of two or three piece of 60 foot and 70 foot mast arms in sequence shall fit together. The bolted splice for two or three piece mast arms shall be as specified in the Contract Documents.

- (1) 50 foot mast arms shall have a butt section of 30 feet in length.
- (2) 60 foot and 70 foot mast arms shall have a butt section of 35 feet in length.
- (3) 38 foot single piece mast arms shall be 9 inch outside diameter at the flange plate and shall be made of 7 gauge (0.179 in.) thickness steel.
- (4) 50 foot two piece mast arm butt sections shall be 10 inch outside diameter at the flange plate and shall be made of 3 gauge (0.250 in.) thickness steel.
- (5) 60 foot two piece and 70 foot three piece mast arm butt sections shall be 12 inch outside diameter at the flange plate and shall be made of 3 gauge (0.250 in.) thickness steel.
- (6) All first extension section of two and three piece mast arms shall be made of 7 gauge (0.179 in.) thickness steel. The second extension section of three piece mast arms shall be made of 11 gauge (0.1196 in.) thickness steel.
- (7) Single 27 foot mast arm pole designed with a 38 foot mast arm length shall be 12 inch outside diameter at the base plate and shall be made of 7 gauge (0.179 in.) thickness steel.
- (8) Single 27 foot mast arm pole designed with a 50 foot mast arm

- length shall be 13 inch outside diameter at the base plate and shall be made of 3 gauge (0.250 in.) thickness steel.
- (9) Single 27 foot mast arm pole designed with 60 foot or 70 foot mast arm lengths shall be 15 inch outside diameter at the base plate and shall be made of zero gauge (0.312 in.) thickness steel.
- (10) Twin 27 foot mast arm poles designed with 50 foot mast arm lengths shall be 13 inch outside diameter at the base plate base and shall be made of 3 gauge (0.250 in.) thickness steel.
- (11) Twin 27 foot mast arm poles designed with mast arm lengths for one mast arm of 50 foot and the remaining mast arm of 60 foot or 70 foot shall be 15 inch outside diameter at the base plate and shall be made of zero gauge (0.312 in.) thickness steel.
- (12) Triple 27 foot mast arm pole designed with mast arm lengths for one mast arm of 38 foot, second mast arm of 60 or 70 foot and the third mast arm of 50 foot shall have 15 inch outside diameter at the base plate and shall be made of zero gauge (0.312 in.) thickness steel.
- (c) The material for mast arm pole base plate shall conform to ASTM A 709, Grade 36 and shall be of sufficient size and strength. The base plate shall be secured to the lower end of the mast arm pole by two continuous electric arc welds. The base plate shall telescope the mast arm pole with one weld on the inside of the base plate at the end of the mast arm pole shaft. The remaining weld shall be located on the outside of the base plate, around the circumference of the mast arm pole. The weld connection shall develop the full strength of the adjacent mast arm pole shaft to resist bending action. All base plates shall be fabricated with the holes for anchor bolts to the size and location dimensions as shown in the details in the Standard Specifications.
- (d) All mast arms and mast arm poles shall be furnished with flange plate(s) as noted in the details in the Standard Specifications. These attachments, including the bolts, shall be connected in such a manner as to develop the minimum guaranteed yield and ultimate tensile strength for the mast arm and mast arm pole. This assembly shall be capable of transferring the maximum moment being carried by the mast arm without distortion or rotation of the mast arm or the attachment. Flange plate(s) shall be connected by the use of 4 bolts. The size of the plates and bolts shall be as shown in the details in the Standard Specifications. Four (1-1/2 inch O.D.) rubber grommets shall be furnished for each mast arm to

accommodate signal heads wiring access.

- (e) The mast arm flange plate shall be secured to the lower end of the mast arm pole by two continuous electric arc welds. The mast arm flange plate shall telescope the mast arm with one weld located on the inside of the flange plate at the end of the mast arm. The remaining weld shall be located on the outside surface of the flange plate around the circumference of the mast arm pole. The weld connections shall develop the full strength of the adjacent mast arm to resist bending action.
- (f) Mast arm flange plates and mast arm pole flange plates surfaces shall be plane to within 1/16 inch and shall be free of any buildup of galvanizing (drips, runs, etc.) which would prevent intimate contact between the connecting surfaces.
- (g) Access hole frames shall be welded into the mast arm pole as detailed in MD 818.11. A galvanized steel cover, conforming to ASTM A 709, Grade 36, shall cover the access hole frame. The access hole cover's top shall be secured to the access hole frame by a hinge fabricated from 0.063 inch stainless steel using a 0.120 inch diameter stainless steel hinge pin. The hinge shall be secured to the access hole frame by two (1/4 in.-20 UNC) hex head stainless steel bolts or three (0.25 in. x 0.75 in.) long security pin button head stainless screws. The hinge shall be secured to the access hole cover by two (1/4 in. - 20 UNC) hex head stainless steel bolts and lock nuts or three (0.188 stainless steel pop rivets. A slotted opening shall be provided at the bottom of the access hole cover to allow for attachment of a furnished one (1/4 in. - 20 UNC) hex head stainless steel bolt into the access hole frame face.
- (h) A 3/8 inch diameter X 1 inch stud copper servit post for two #6 AWG stranded wire shall be furnished into the bottom of the access hole frame.
- (i) Mast arm poles shall be provided with entranceways for cable as noted on the appropriate detail. These holes shall be factory drilled and a straight tapped coupling, conforming to Underwriters Laboratory's UL-6 Specification, for 3 inch rigid conduits, shall be installed for each hole. A nipple with a unitized hexagonal fitting and integral inside radius on one end shall then be installed and fully seated on the interior side of the coupling. Location and installation of the coupling shall be as shown in the details in the Standard Specifications
- (j) "J" hooks shall be installed as follows, located 1 foot above the highest

mast arm T dimension.

- (1) A single "J" hook shall be welded inside the pole for single mast arm poles.
  - (2) Two "J" hooks shall be welded inside the pole for twin mast arm poles and triple mast arm poles.
- (k) All mast arms, mast arm poles, access hole frames and hardware, except materials manufactured from stainless steel or cast aluminum, shall be hot dipped galvanized. The galvanized coating shall conform to the thickness, adherence, and quality requirements of ASTM A 123 or A 153 for hardware. Threaded components shall be chased and cleaned after galvanizing. All internally threaded components shall be tapped the minimum amount required to permit assembly on the coated externally threaded fastener. Internally threaded components shall be provided with a lubricant, which shall be clean and dry to the touch.
- (l) Each mast arm pole shall be furnished with four removable ornamental anchor bolt covers made of cast aluminum. Bolt holes for attaching the bolt covers to the base plate shall be drilled at the location obtained by following the diagonal line of the base plate until it intersects the bolt circle diameter. Then proceed tangentially along the bolt circle diameter a distance equal from the anchor bolt center to the bolt slot center to locate the bolt attachment location as detailed MD 818.14. Attachment to the base shall be made using hex head stainless steel bolts (1/4 in.- 20 UNC). The removable ornamental anchor bolt covers may be made of zinc die cast or UV inhibiting plastic; however, the Engineer, as part of the cut sheet submittal process, must approve the alternate anchor bolt covers.
- (m) Each mast arm extension section and mast arm pole shall be furnished with a removable domed cap, fabricated from cast aluminum, circumferentially attached to the outside of the pole shaft or mast arm end with 3 hex head stainless steel bolts (1/4 in.- 20 UNC). All mast arm caps shall have inside diameter one inch. larger than the outside diameter of mast arm end. The mast arm end shall have one (1) hex head stainless steel bolt (1/4 in.- 20 UNC) bolted through the cap and the mast arm and secured with one (1) stainless steel nylon insert locknut.
- (n) Each mast arm and mast arm pole shall have an identification plate mechanically attached, oriented such that the identification plate may be read from a ground observation position, as specified in the Contract

### Documents.

- (1) Single piece mast arms and the butt section of two and three piece mast arms shall have the identification plate attached 6 inches above the flange plate.
  - (2) Each extension section of two and three piece mast arms shall have the identification plate attached 6 inches from the larger diameter end.
  - (3) Poles shall have the identification plate attached 6 inches above the bottom flange plate.
- (o) Recessed hub type, galvanized malleable iron plugs shall be inserted flush into all mast arm pole couplings.

### Anchor Bolts.

Refer to MD SHA Details: 801.01, 818.01, 818.06, 818.07, 818.08, 818.09, 818.10, 818.14, 818.19.

- (a) Each mast arm pole anchor bolt shall be made of steel in accordance with ASTM M 314, Grade 55 SI or ASTM F1554 Grade 55.
- (b) Anchor bolt threads shall be of cut thread design with a minimum 9 inches of threads at the top.
- (c) A 90 degree ell bend 6 inches in length shall be part of the overall bolt length.
- (d) The diameter of the anchor bolt shall be stamped into the top of the threaded end of each anchor bolt.
- (e) Each anchor bolt shall be provided with two anchor bolt nuts and two flat washers.
  - (1) Anchor bolt nuts shall conform to ASTM A 194 grade 2 or 2H or ASTM A 563 A, D, or DH.
  - (2) All nuts shall be tapped oversize the minimum amount required to permit assembly on the coated externally threaded fastener.

- (3) Washers shall conform to ASTM F436.
- (f) All nuts, washers, and the top 12 inches of all anchor bolts shall be hot dipped or mechanically galvanized. The galvanized coating shall conform to the thickness, adherence, and quality requirements of ASTM A 123 or ASTM A 153 for hardware.

All high strength bolts (of a given length), nuts (of a given size) and washers (of a given diameter) shall be from the same manufacturing lot per each requisition of materials. The use of foreign made fasteners is prohibited!

**Alternate Design.** Alternate mast arm and mast arm pole designs will be considered provided the following qualifications are observed:

- (a) Alternate mast arm designs may use sectional construction provided each section has a minimum length of 30 feet except for the outer most section.
- (b) Overlap between sections shall be minimum 18 inches.
- (c) Bolt circle diameters shall be as specified in the Contract Documents.
- (d) Alternate post designs may be straight (not tapered) sections and shall have a base diameter equal to, or no greater than one (1) inch more than, those values shown on the details in the Standard Specifications.
- (e) Alternate designs shall be structurally equivalent to the original design and physical requirements of these specifications. Calculations demonstrating structural equivalency and supporting pole drawings for these designs must be submitted for approval by the Engineer as part of the cut sheet submittal process.

#### **MEASUREMENT AND PAYMENT.**

- (a) Method 1 - **Furnishing and installing galvanized traffic signal mast arms and mast arm poles.**

Furnish and install for mast arm(s) and mast arm(s) poles will be measured and paid for at the contract unit price per each type of pole and mast arm(s) size as specified in the Contract Document. The payment will be full compensation for furnishing & installing all materials including labor, equipment, materials, tools, and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in section 801.

Modified Mast Arm Adjustment (per Mast Arm) will be will be measured and paid for at the contract unit price per each mast arm regardless of its length as specified in the Contract Document.

(b) Method 2 - **Installing** galvanized traffic signal mast arms and mast arm poles.

Mast arm(s) and mast arm(s) poles will be furnished by Baltimore County and installed by the Contractor. The installation of the mast arm(s) and mast arm(s) poles will be measured and paid for at the contract unit price per each type of mast arm pole(s) and mast arm(s) size installed as specified in the Contract Documents. The payment will be full compensation for the installation and all materials including labor, equipment, materials, tools, and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in section 801.

**Tag Details**

**Single Mast Arm Pole**

Mfg.:	[1]	Contract. #:	[2]
Pole Height:	[3]		
Arm Sizes:	[4]		
Anchor Bolts:	[5]	Bolt	
Circle:	[8]		
Flange Bolts:	[7]		

### One Piece Mast Arm

Mfg.: _____ [1]	Contract #: _____ [2]
1	
Arm Length: _____ [6]	
Flange Bolts: _____ [7]	

### Two or three Piece Mast Arm - Butt Section

Mfg.: _____ [1]	Contract #: _____ [2]
1	
Butt For Arms: _____ [4]	
Flange Bolts: _____ [7]	
Connection Bolt: _____ [9]	

### Two or three Piece Mast Arm - Extension Section

Mfg.: _____ [1]	Contract #: _____ [2]
1	
Extension Arm: _____ [6]	
Connection Bolt: _____ [9]	

**Twin Mast Arm Pole  
(Identical Size Flange Plates)**

Mfg.: _____ [1]	Contract #: _____ [2]
1	
Pole Height: _____ [3]	
Arm Sizes: _____ [4]	
Anchor Bolts: _____ [5]	Bolt Circle: _____
[8]	
Flange Bolts: _____ [7]	

**Twin Mast Arm Pole  
(Different Size Flange Plates)**

Mfg.: _____ [1]	Contract #: _____ [2]
1	
Pole Height: _____ [3]	
Left Arm Sizes: _____ [4]	
Right Arm Sizes: _____ [4]	
Anchor Bolts: _____ [5]	Bolt Circle: _____ [8]
Left Arm Flange Bolts: _____ [7]	
Right Arm Flange Bolts: _____ [7]	

**Triple Mast Arm Pole  
(Different Size Flange Plates)**

Mfg.: _____ [1]	Contract #: _____ [2]
Pole Height: _____ [3]	
Left Arm Sizes: _____ [4]	
Center Arm Sizes: _____ [4]	
Right Arm Sizes: _____ [4]	
Anchor Bolts: _____ [5]	Bolt Circle: _____ [8]
Left Arm Flange Bolts: _____ [7]	
Center Arm Flange Bolts: _____ [7]	
Right Arm Flange Bolts: _____ [7]	

**Tag Reference**

- [1] Name of the manufacturer of the mast arm or mast arm pole.
- [2] County Contract Number of the mast arm or mast arm pole.
- [3] 27 foot height.
- [4] Mast Arm Size and Orientation<sup>1</sup>

<sup>1</sup>For twin mast arm poles with identical size flange plates, indicate L & R preceding the 50' mast arm size; For twin mast arm poles with different size flange plates, indicate either 50' or 60'-70' mast arm sizes in the corresponding Left Arm Size or Right Arm Size as oriented by the line bisecting the acute angle formed by the two mast arm pole flange plates.

For triple mast arm poles with different size flange plates, indicate either 50', 60'-70' or 38' mast arm sizes in the corresponding Left Arm Size, Center Arm Size or Right Arm Size as oriented by the centerline of the mast arm pole center flange plate.

Pole Gauge Size7 GA  
3 GA  
0 GAIndicate38'  
50'  
60' or 70'

## [5] Anchor Bolts

Pole Gauge Size7 GA  
3 GA  
0 GAIndicate1-1/2" x 60" & 2 washers  
1-3/4" x 90" & 2 washers  
2" x 90" & 2 washers

## [6] Mast Arm Length -

Constructed Extension for arm length50'  
60'  
70'Indicate50'  
60'-70'  
70'[7] Flange Bolt Size<sup>2</sup>Pole Gauge Size7 GA  
3 GA  
0 GAIndicate1-1/4" x 4" & washer  
1-1/2" x 5" & washer  
1-1/4" x 6-1/2" & 2 flat washers  
& lock washer

## [8] Bolt Circle

Pole Gauge Size7 GA  
3 GA  
0 GAIndicate16" Diameter.  
18" Diameter  
22" Diameter

<sup>2</sup>For twin mast arm poles with identical size flange plates, indicate L & R preceding the 1-1/2" x 5" & washer Flange Bolt Size; For twin mast arm poles with different size flange plates, indicate either 1-1/2" x 5" & washer or 1-1/4" x 6-1/2" & 2 flat washers & lock washer flange bolt sizes in the corresponding Left Flange Bolt Size or Right Flange Bolt Size as oriented by the line bisecting the acute angle formed by the two mast arm pole flange plate. For triple mast arm poles with different size flange plates, indicate either 1-1/2" x 5" & washer, 1-1/4" x 6-1/2" & 2 flat washers & lock washer or 1-1/4" x 4" & washer flange bolt sizes in the corresponding Left Flange Bolt Size, Center Flange Bolt Size or Right Flange Bolt size as oriented by the centerline of the mast arm pole center flange plate.

**[ 9 ]** Connection Bolt Size

Two or three Piece Arm Size

Indicate<sup>3</sup>

50'  
60'  
70'

5/8" x Var.  
5/8" x Var.  
5/8" x Var.

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<sup>3</sup>Length to be determined by the successful bidder.

**CATEGORY 800  
TRAFFIC****SECTION 853 GALVANIZED TRAFFIC SIGNAL STRAIN POLES**

**DESCRIPTION.** This work shall consist of furnishing and/or installing galvanized traffic signal strain poles at locations specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.** Materials shall conform to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals except as noted. All welding shall be in accordance with the American Welding Society (AWS) Structural Welding Code D1.1 - Steel, Tubular Structures.

**Strain Pole(s)**

Refer to MD SHA Details: 801.01, 818.01, 818.03, 818.04, 818.11, 818.14, 818.15, 818.19.

Each strain pole furnished shall consist of a design from a steel shaft with a steel base plate, four anchor bolts and miscellaneous hardware.

- (a) The strain pole shaft shall be manufactured from steel tubing conforming to ASTM A 595 Grade A or equal. Each strain pole shaft shall be fabricated of one length and shall have one longitudinal weld, parallel to the long axis of the strain pole shaft, with no transverse welds. The longitudinal weld shall be finished to form a smooth outside surface and the wall of the strain pole shaft shall be uniform in thickness including the welded area. The strain pole shaft shall be round or multi-sided (eight sides or more) in cross section and be uniformly tapered from butt to tip with approximately a one inch reduction in diameter for each seven feet in length (0.14 in./ ft.).
- (1) All 30 foot strain poles shall be 12 inches outside diameter at the base plate and shall be made of zero gauge (0.312 in.) thickness steel.
- (2) All 32 foot strain poles shall be either 12 inches or 14 inches outside diameter at the base plate and shall be made of double zero gauge (0.625 in.) thickness steel.

- (b) All strain poles shall be furnished with a base plate with a minimum 10 inch opening. The material shall meet the requirements of ASTM A 709, Grade 36 and shall be of sufficient size and strength. The base plate shall be secured to the lower end of the strain pole shaft by two continuous electric arc welds. The base plate shall telescope the strain pole shaft with one weld on the inside of the base plate at the end of the strain pole shaft. The remaining weld shall be located on the outside of the base plate around the circumference of the strain pole shaft. The weld connection shall develop the full strength of the adjacent strain pole shaft to resist bending action. All base plates shall be fabricated with the holes for anchor bolts to the size and location dimensions as shown in the details in the Standard Specifications.
- (c) Access hole frames shall be welded into the strain pole as detailed in MD 818.11. A galvanized steel cover, conforming to ASTM A 709, Grade 36 shall cover the access hole frame. The access hole cover's top shall be secured to the access hole frame by a hinge fabricated from 0.063 inch stainless steel using a 0.120 inch diameter stainless steel hinge pin. The hinge shall be secured to the access hole frame by two (1/4 in.- 20 UNC) hex head stainless steel bolts or three 0.25 inch X 0.75 inch long security pin button head stainless steel screws. The hinge shall be secured to the access hole cover by two (1/4 in.- 20 UNC) hex head stainless steel bolts and lock nuts or three 0.188 stainless steel pop rivets. A slotted opening shall be provided at the bottom of the access hole cover to allow for attachment of a furnished (1/4 in.- 20 UNC) hex head stainless steel bolt into the access hole frame face.
- (d) A 3/8 inch diameter X 1 inch stud copper servit post for two #6 AWG stranded wire shall be furnished into the bottom of the access hole frame.
- (e) Strain poles shall be furnished with entranceways for cable as detailed in MD 818.15. These holes shall be factory drilled and a straight tapped coupling, conforming to Underwriters Laboratory's UL-6 Specification, for 3 inch rigid conduits, shall be installed for each hole. A nipple with a unitized hexagonal fitting and integral inside radius on one end shall then be installed and fully seated on the interior side of the coupling. Location and installation of the coupling shall be as shown in the details in the Standard Specifications.
- (f) A "J" hook shall be welded near the top of the strain pole shaft for cable support.
- (g) All strain poles, access hole frame and hardware, except materials

manufactured from stainless steel or cast aluminum, shall be hot dipped galvanized. The galvanized coating shall conform to the thickness, adherence and quality requirements of ASTM A 123 or ASTM A 153 for hardware. Threaded components shall be chased and cleaned after galvanizing. All internally threaded components shall be tapped oversize the minimum amount required to permit assembly on the coated externally threaded fastener. Internally threaded components shall be provided with a lubricant, which shall be clean and dry to the touch.

- (h) Each strain pole shall be furnished with four removable ornamental anchor bolt covers made of cast aluminum. Bolt holes for attaching the bolt covers to the base plate shall be drilled at the location obtained by following the diagonal line of the base plate until it intersects the bolt circle diameter, then proceeding tangentially from the bolt circle diameter a distance equal to the Anchor Bolt Center to Bolt Slot Center Distance as detailed in MD 818.14. Attachment to the base shall be made using hex head stainless steel bolts (1/4 in. - 20 UNC). The removable ornamental anchor bolt covers may be made of zinc die cast or UV inhibiting plastic; however, the Engineer, as part of the cut sheet submittal process, must approve the alternate anchor bolt covers.
- (i) Each strain pole shall be furnished with a removable domed cap, fabricated from cast aluminum, circumferentially attached to the inside or outside of the pole shaft with three hex head stainless steel bolts (1/4 in. - 20 UNC).
- (j) Each strain pole shall have an identification plate mechanically attached, oriented such that the identification plate may be read from a ground observation position as specified in the Contract Documents..
- (k) Recessed hub type, galvanized malleable iron plugs shall be inserted flush into all strain pole couplings.

#### **Anchor Bolts.**

Refer to MD SHA Details: 801.01, 818.01, 818.14, 818.15, 818.19.

- (a) Each strain pole anchor bolt shall be made of steel and conform to ASTM 314, Grade 55 Sl.
- (b) Anchor bolt threads shall be of cut thread design with a minimum 9 inches of threads at the top.

- (c) A 90 degree ell bend 6 inches in length shall be part of the overall bolt length.
- (d) The diameter of the anchor bolt shall be stamped into the top of the threaded end of each anchor bolt.
- (e) Each anchor bolt shall be provided with two anchor bolt nuts and two flat washers.
  - (1) Anchor bolt nuts shall conform to ASTM A 194 grade 2 or 2H or ASTM A 563 A, D, or DH.
  - (2) All nuts shall be tapped oversize the minimum amount required to permit assembly on the coated externally threaded fastener.
  - (3) Washers shall conform to ASTM F 436.
- (f) All nuts, washers and the top 12 inches of all anchor bolts shall be hot dipped or mechanically galvanized. The galvanized coating shall conform to the thickness, adherence and quality requirements of ASTM A 123 or ASTM A 153 for hardware.

All high strength bolts (of a given length), nuts (of a given size) and washers (of a given diameter) shall be from the same manufacturing lot per each requisition of materials. The use of foreign made fasteners is prohibited.

#### **Alternate Design.**

Alternate strain pole designs will be considered provided the following qualifications are observed:

- (a) Alternate strain pole designs shall be of one piece construction.
- (b) Bolt circle diameters shall be followed.
- (c) Alternate strain pole designs shall have base plate dimensions equal to those values shown on the details in the Standard Specifications.
- (d) Single straight pipe sections are not acceptable.
- (e) Alternate designs shall be structurally equivalent to the original design and physical requirements of these specifications. Calculations demonstrating

structural equivalency and supporting pole drawings for these designs must submitted for approval by the Engineer as part of the cut sheet submittal process.

**MEASUREMENT AND PAYMENT.**

**(a) Method 1 - Furnishing and installing galvanized traffic signal strain poles.**

Furnish and install for strain poles will be measured and paid for at the contract unit price per each type of strain pole as specified in the Contract Document. The payment will be full compensation for furnishing & installing all materials including labor, equipment, materials, tools, and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in section 801.

**(b) Method 2 - Installing galvanized traffic signal strain poles.**

Strain poles will be furnished by Baltimore County and installed by the Contractor. The installation of the strain poles will be measured and paid for at the contract unit price per each type of strain pole installed as specified in the Contract Document. The payment will be full compensation for the installation and all materials including labor, equipment, materials, tools, and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in section 801.

**Tag Detail**

Mfg.:	[ 1 ]	contract #:	[ 2 ]		
Pole Diameter:	[ 3 ]	Height:	[ 4 ]	Gauge:	[ 5 ]
Anchor Bolts:	[ 6 ]	Bolt Circle:	[ 7 ]		

**Tag Reference**

- [1] Name of the manufacturer of the strain pole.
- [2] County Contract Number of the strain pole.
- [3] Pole outside diameter at the base: 12" O.D. or 14" O.D.
- [4] Pole height: 30' or 32'
- [5] Pole gauge: 0 GA or 00 GA
- [6] Anchor bolt size: 1- $\frac{3}{4}$ " Dia. x 90" Length or 2- $\frac{1}{4}$ " Dia. x 96" Length
- [7] Bolt circle diameter: 16" Dia. or 22" Dia.

**CATEGORY 800  
TRAFFIC**

**SECTION 854 GALVANIZED TRAFFIC SIGNAL PEDESTAL POLES AND  
TRANSFORMER BASES**

**DESCRIPTION.** This work shall consist of furnishing and/or installing galvanized traffic signal pedestal poles and transformer bases at locations specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.** Materials shall conform to AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals except as noted. All welding shall conform to American Welding Society (AWS) Structural Welding Code D1.1 - Steel, Tubular Structures.

**Pedestal Poles**

Refer to MD SHA Details: 818.16, 818.17, 821.01.

Each pedestal pole's height shall be determined by the total height of the pedestal pole including the transformer base.

- (a) **10 foot** pole height shall consist of a 103 inch steel shaft with a steel base plate plus a 17 inch transformer base.
- (b) **14 foot** pole height shall consist of a 151 inch steel shaft with a steel base plate plus a 17 inch transformer base.

Each pedestal pole furnished shall consist of a design from a steel shaft with a steel base plate, transformer base and all miscellaneous hardware.

- (a) The pedestal pole shaft shall be fabricated of one length and shall have one longitudinal weld, parallel to the long axis of the pedestal pole shaft, with no transverse welds. The longitudinal weld shall be finished to form a smooth outside surface and the wall of the pedestal pole shaft shall be uniform in thickness including the welded area. The pedestal pole shaft shall be round or multi-sided (less than eight sides not acceptable) in cross section. **14 foot units** shall be uniformly tapered from butt to tip with a 1 inch reduction in diameter for each 7 feet in length (0.14 in./ft). **10 foot units** shall not be tapered.

- (1) All 10 foot pedestal pole shafts shall be 4-1/2 inch outside diameter, Schedule 40 pipe, and conform to A 501.
  - (2) All 14 foot pedestal pole shafts shall be 7-1/2 inch outside diameter at the base and shall be made of 11 gauge (0.119 in.) thickness steel conforming to ASTM A 595, Grade A or equivalent.
- (b) The base plate material shall meet the requirements of ASTM A 709, Grade 36. The base plate shall be secured to the lower end of the pedestal pole shaft by two continuous electric arc welds. The base plate shall telescope the pedestal pole shaft with one weld on the inside of the base plate at the end of the pedestal pole shaft. The remaining weld shall be located on the outside of the base plate at the top of the pedestal pole shaft. The weld connection shall develop the full strength of the adjacent pedestal pole shaft to resist bending action. All bases plate shall be fabricated with the holes for anchor bolts to the size and location dimensions as shown in MD 818.16 and MD 818.17.
- (c) 14 foot pedestal poles shall be furnished with entrance ways for cable as noted on the appropriate detail. These holes shall be factory drilled and a straight tapped coupling, conforming to Underwriters Laboratory's UL-6 Specification, for 2 inch rigid conduits, shall be installed for each hole. A nipple with a unitized hexagonal fitting and integral inside radius on one end shall then be installed and fully seated on the interior side of the coupling. Location and installation of the coupling shall be as shown in MD 818.17.
- (d) All pedestal poles and hardware, except materials manufactured from stainless steel or cast aluminum shall be hot dipped galvanized. The galvanized coating shall conform to the thickness, adherence, and quality requirements of ASTM A 123 and ASTM A 153 for hardware. Threaded components shall be chased and cleaned after galvanizing. All internally threaded components shall be tapped oversize the minimum amount required to permit assembly on the coated externally threaded fastener. Internally threaded components shall be provided with a lubricant, which shall be clean and dry to the touch.
- (e) Each pedestal pole shall be furnished with a removable domed cap, fabricated from cast aluminum, circumferentially attached to the side of the pole with three hex head type 304 stainless steel bolts (1/4 in.-20 UNC).
- (f) Each pedestal pole shall have an identification plate mechanically attached 6 inches above the pedestal pole base plate and oriented so that the

identification plate may be read from a ground observation position as specified in the Contract Documents.

- (g) Recessed hub type, galvanized malleable iron plugs shall be inserted flush into all couplings.

### Transformer Bases

Refer to MD SHA Details: 818.18, 821.01.

- (a) Akron Foundry Company, Union Metal Company, Valmont Industries, or as approved by the Engineer will manufacture all transformer bases.
- (b) Each transformer base shall be furnished with four hex head bolts, four hex head nuts and all associated hardware as shown on MD 821.01 and MD 821.02 for fastening the pedestal pole base plate to the top of the transformer base. All bolts shall conform to ASTM A 325 specifications and shall be galvanized.

### Anchor Bolts

Refer to MD SHA Details: 801.01, 821.01.

- (a) Each pedestal pole anchor bolt shall be made of steel conforming to ASTM M 314, Grade 55 SI or ASTM F1554 Grade 55.
  - (b) Anchor bolt threads shall be of cut thread design with a minimum 6 inches of threads at the top.
  - (c) A 90 degree ell bend 4 inches in length shall be part of the overall 40 inch bolt length.
  - (d) The diameter of the anchor bolt shall be stamped into the top of the threaded end of each anchor bolt.
  - (e) Each anchor bolt shall be provided with two attached heavy hex nuts and two attached flat washers.
- (1) Anchor bolt nuts shall conform to ASTM A 194, grade 2 or 2H, or ASTM A 563, A, D, or DH.

(2) All nuts shall be tapped oversize the minimum amount required to permit assembly on the coated externally threaded fastener.

(3) Washers shall conform to ASTM F 436.

(f) All nuts, washers, and the top 12 inches of all anchor bolts shall be hot dipped or mechanically galvanized. The galvanized coating shall conform to the thickness, adherence, and quality requirements of ASTM A 123 or ASTM A 153 for hardware.

All high strength bolts (of a given length), nuts (of a given size), and washers (of a given diameter) shall be from the same manufacturing lot per each requisition of materials.

#### MEASUREMENT AND PAYMENT.

(a) Method 1 - **Furnishing and installing** galvanized traffic signal pedestal poles and transformer bases.

Pedestal poles and transformer bases will be measured and paid for at the Contract unit price per each type of pedestal pole and transformer base furnished and installed as specified in the Contract Document. The payment will be full compensation for furnishing and installing of the pedestal pole and transformer base and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in Section 801.

(b) Method 2 - **Installing** galvanized traffic signal pedestal poles and transformer bases.

Pedestal poles and transformer bases will be furnished by Baltimore County and installed by the Contractor. The installation of the pedestal poles and transformer bases will be measured and paid for at the Contract unit price per each type of pedestal pole and transformer base installed as specified in the Contract Document. The payment will be full compensation for the installation of the pedestal pole and transformer base and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Anchor bolts will be measured and paid for as specified in Section 801.

### Tag Detail

Mfg.:	[11]	Contract #:	[21]
Pole Diameter:	[31]	Height:	[41]
	[51]	Gauge:	[1
Anchor Bolts:	[61]	Bolt Circle:	[71]

### Tag Reference

- [1] Name of the manufacturer of the pedestal pole.
- [2] County Contract Number of the pedestal pole.
- [3] Pole outside diameter at the base: 4-½" O.D. or 7-½" O.D.
- [4] Pole height<sup>1</sup>: 10' or 14'
- [5] Pole gauge: Schedule 40 or 11 GA
- [6] Anchor bolt size: 1" Dia. x 40" Length
- [7] Bolt circle diameter: 12" Dia.

<sup>1</sup>Pole height includes the height of the pedestal pole and transformer base. Typically, the transformer base is 17 inches in height, which corresponds, to 10 foot pole having a height of 103 inches; and a 14 foot pole having a height of 151 inches.

**CATEGORY 800  
TRAFFIC**

**SECTION 855 EQUIPMENT TURN ON, EQUIPMENT AND MATERIALS -  
PICK UP, REMOVING, RETURNING, MAINTAINING,  
SALVAGING, AND DISPOSAL**

**DESCRIPTION.** This work shall consist of pick up of County and/or Administration furnished materials, delivery of salvaged material and equipment to County and/or Administration, disposal of existing material and equipment, and maintenance of existing equipment as specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.** Not applicable

**CONSTRUCTION.** The Contractor shall notify the County Inspector at the Baltimore County Signal Shop at 410-887-8601 or by the Inspector's cell phone (Contact the Inspector for his cell phone number) every day the Contractor is working at a work assignment. This will allow the Inspector to complete an inspector's daily report (IDR) for all construction completed each working day. Work performed without this notification will be treated as unauthorized work.

**Equipment Turn On.** The Contractor shall notify the Inspector within ten (10) working days before scheduled turn-on of the project to allow the County and/or Administration to install any additional traffic control device(s).

The Contractor shall notify the Inspector five (5) working days before the scheduled turn-on of the project for a pre-turn-on inspection.

The Contractor shall contact and arrange for all parties (i.e. - County maintenance and inspection personnel, police details, utility company, if necessary appropriate SHA personnel) involved with the equipment turn-on and schedule a date and time for that turn-on subject to the Inspector's approval.

**Pick-Up of Furnished Materials.** The Contractor shall notify the appropriate facility a minimum of 72 hours in advance of the anticipated pick up or delivery of materials. The Facilities for pick-up or delivery are listed below:

<p><b>SHA Sign &amp; Signal Shop</b>                  7491 Connelley Drive                  Hanover, Maryland 21076                  Signal Phone - 410-787-7667                  Signal Phone - 410-787-7670</p>	<p><b>County Sign &amp; Signal Shop</b>                  12200 C Long Green Pike                  Glen Arm, Maryland 21057                  Phone - 410-887-8601</p>	<p><b>County Pole Yard</b>                  Baltimore Landfill                  Beaver Dam Road                  Cockeysville, MD                  21030                  Phone - 410-887-8601</p>
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The Contractor shall be responsible for the transportation, labor, equipment, tools and incidentals necessary to obtain and load any County and/or Administration furnished materials.

Materials not furnished by the County and/or Administration shall be furnished by the Contractor.

**Removal and Salvage of the Existing Material and Equipment.**

Materials salvaged by the Contractor shall be delivered to a facility (see facilities mentioned in pick-up of furnished materials) in the same condition as they existed in the field and unloaded as directed by the Inspector.

The Contractor shall tag all materials to be salvaged. The tag shall indicate the location from which the materials were removed and the County's and/or Administration's Contract number.

Materials to be salvaged shall include controllers and cabinets, galvanized and wood structures, and streetlighting equipment. Any loss in value due to damaged or missing material will be deducted from the Contractor's payment.

Concrete foundations shall be removed as specified in 207.03.01. All holes caused by this removal shall be backfilled, compacted and restored to surrounding conditions.

The Contractor shall be responsible for disposal of all material not salvaged.

### **Removal and Disposal of Existing Material and Equipment.**

All existing hard rubber detectors and handholes not shown on the Plans shall be removed and the holes shall be backfilled, compacted and restored to surrounding conditions. The sidewalk where handholes are removed shall be reconstructed to the nearest tooled joint or expansion joint. The roadway where hard rubber detectors are removed shall be reconstructed in conformance with Administration utility patch repair standards.

Existing inductive loop detectors and magnetic detectors not shown on the Plans shall be disconnected.

Concrete foundations shall be removed as specified in 207.03.01. All holes caused by this removal shall be backfilled, compacted and restored to surrounding conditions.

The Contractor shall be responsible for disposal of all material not salvaged.

**Storage of Materials.** Materials shall be bundled, stored, and protected in conformance with the manufacturer's recommendations or as approved by the Engineer.

**Maintenance of Materials and Equipment.** The maintaining agency will continue maintenance of any existing signals until the Contractor places new equipment into operation.

When the Contractor's work requires adjustments to the traffic control devices to maintain the minimum County and/or Administration standards, the adjustments to the traffic control devices shall be made within 4 hours of verbal notification by the Engineer and/or Inspector. If the Contractor fails to comply within this time, the County will perform the adjustments and deduct the cost of the adjustments from the Contractor's payment.

Existing signals shall remain in their original condition until the new signals have been completed, satisfactorily tested and its operation accepted by the Engineer.

The Contractor shall maintain the continuous operation of vehicular and pedestrian detectors. If the Contractor damages any detector, it shall be repaired or replaced as directed by the Engineer. If any vehicular and pedestrian detectors are damaged by the Contractor and are not scheduled to be replaced, the Contractor shall replace any damaged detector at no cost to the County. If the Contractor fails to repair any damaged detector(s), the County will perform the repairs and deduct the cost of the repairs from the Contractor's payment.

All traffic signals shall be operational and actuated as specified in the Contract Documents.

The Contractor shall plan the work to minimize interference with any existing traffic control device(s).

### **MEASUREMENT AND PAYMENT.**

**Equipment Turn On.** Equipment Turn On will not be measured. This cost will be incidental to other pertinent items specified in the Contract Documents.

**Pick-Up of Furnished Materials.** Pick-up of County and/or Administration furnished materials will not be measured. This cost will be incidental to other pertinent items specified in the Contract Documents.

### **Removal and Salvage Existing Cabinet and Controller**

**Base Mounted Cabinets** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. Removal of the foundation for the base mounted cabinet, the disposal of any materials not salvaged, and the delivery of the base mount cabinet to the appropriate facility listed in this provision shall be incidental to this item.

**Pole Mounted Cabinets** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of any materials not salvaged, and the delivery of the pole mount cabinet to the appropriate facility listed in this provision shall be incidental to this item.

### **Removal and Salvage Strain Poles, Mast Arms & Mast Arm Pole, Wood Poles, Signal Heads, and Signs**

**Removal and Salvage Strain Pole** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. Removal of the foundation for the strain pole, the disposal of any materials not salvaged, and the delivery of the strain pole to the appropriate facility listed in this provision shall be incidental to this item.

**Removal and Salvage Mast Arm(s) and Mast Arm Pole** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. Removal of the foundation for the mast arm(s) and mast arm pole, the disposal of any materials not salvaged, and the delivery of the mast arm(s) and mast arm pole to the appropriate facility listed in this provision shall be incidental to this item.

**Removal and Salvage Wood Pole** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of any materials not salvaged and the delivery of the wood pole to the appropriate facility listed in this provision shall be incidental to this item.

**Removal and Salvage Signal Head (any type)** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of any materials not salvaged and the delivery of the signal head to the appropriate facility, listed in this provision shall be incidental to this item.

**Removal and Salvage Sign (any size and/or type)** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of any materials not salvaged and the delivery of the sign to the appropriate facility listed in this provision shall be incidental to this item.

**Removal and Disposal of Existing Material and Equipment.** Removal and disposal of existing material and equipment and any materials not salvaged will be paid for at a fixed price of \$1650 for each assigned task. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. Removal of all foundations for cabinets, strain poles, mast arm(s) and mast arm poles (not being salvaged), and the disposal of all materials not salvaged will be included in this pay item.

**Removal Existing Signal Handbox** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of all materials not salvaged shall be incidental to this item. This item will only be used in isolated cases such as loop repair tasks, maintenance work, and minor repair tasks.

**Removal a Foundation (Any Type)** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The disposal of all materials not salvaged shall be incidental to this item. This item will only be used in isolated cases such as loop repair tasks, maintenance work, and minor repair tasks.

**Maintenance of Existing Equipment.** Material storage, cable sealing and handling, adjustments to maintain minimum County and/or Administration standards on existing signals made necessary by new signal or geometric modifications, and Contractor repair of any damaged detector caused as a result of Contractor's error will not be measured. This cost will be incidental to other pertinent items specified in the Contract Documents.

**Inspection.** Inspections will not be measured. This cost will be incidental to other pertinent items specified in the Contract Documents.

**CATEGORY 800  
TRAFFIC**

**SECTION 856 - AS-BUILT FOR TRAFFIC SIGNAL**

**DESCRIPTION.** This work shall consist of providing As-Built construction plans for Traffic Signal related work as specified in the Contract Documents or as directed by the Engineer. This work shall be submitted before the final acceptance of the project.

**MATERIALS.** The Contractor shall submit the As-Built plan and construction details on a CD utilizing the latest operating system format used by Baltimore County Bureau Of Traffic Engineering and Transportation Planning. The Contractor shall also provide a mylar original of the As-Built plan(s).

**CONSTRUCTION.** As-built construction information shall indicate the exact location and size of all conduits, poles, pedestals, handholes, and detectors chart to within six (6) inches of actual location as dimensioned and referenced to physical features. The As- Built drawing should also contain the intersection's wiring diagram and phasing chart. A construction details listing shall also be provided.

The Contractor shall submit As-Built information in Intergraph's Microstation Powerdraft 2004 computer aided design drafting (CADD) environment, adhering to the latest CADD practices and procedures developed by the Baltimore County Bureau Of Traffic Engineering and Transportation Planning. The latest standard CADD practices and procedures which includes a level manager program can be obtained by contacting Mr. William Fox, Division of Traffic Engineering-410-887-3554. If available, the County will furnish the Contractor with the existing traffic signal plans in Microstation format on a CD or through e-mail.. The Contractor shall submit As-Built plans only in Microstation Powerdraft 2004 format as required in the Contract Documents using one of the following methods as determined by the Administration:

If no updated plan(s) is available, the contractor shall resurvey and As-Built.

If a hard copy of the plan(s) is available and no CADD file is available, the contractor shall digitize existing plans and As-Built.

If a hard copy of the plan(s) and a CD(s) are available, the contractor shall use existing plan on disk and As-Built.

Upon approval of the submitted As-Built information, the Administration will assume ownership of the final drawings and CD.

As-Built for Traffic signal plans shall have a 1"=20' scale.

If an As-Built for a system is required, the Contractor shall provide As-Built showing all system equipment using a 1"=50' scale or a different scale, if approved by the Engineer. The Contractor shall provide necessary detail at the intersection as it relates to the system.

**MEASUREMENT AND PAYMENT.** Costs associated with providing As-Built plans will not be measured for payment but will be paid for at the contract unit price per each as specified below:

1. Resurvey and As-Built.
2. Digitize existing plans and As-Built.
3. Use existing plan on disk and As-Built.

The payment will be full compensation for all materials and equipment necessary to complete the work and submitting the final product in Microstation Powerdraft 2004.

In the event that bid items as specified above for As-Built submittal are not used, the Contractor shall submit a hard copy of the As-Built plan(s) to the Baltimore county Division of Traffic Engineering and the cost for this shall be incidental to other pertinent bid items in the Contract Documents.

**CATEGORY 800  
TRAFFIC**

**SECTION 860 - INSTALLING AND RELOCATING WOOD POLES AND  
INSTALLING, REMOVING AND /OR ADJUSTING BACK GUYS**

**860.01 DESCRIPTION.** This work shall consist of installing wood poles and installing, removing and/or adjusting back guys as specified in the Contract Documents or as directed by the Engineer.

**860.02 MATERIALS.**

40 foot Class II Wood Pole  
Steel Span Wire  
8 foot Back Guy Anchor  
Guy Guard

As approved by Baltimore County.  
950.09 and Special Provision 819  
As approved by Baltimore County.  
As approved by Baltimore County.

**860.03 CONSTRUCTION.**

**860.03.01 Installing 40 Foot Wood Pole.** The wood pole shall be installed minimum of eight (8) feet deep in virgin soil.

**860.03.02 Installing, Removing and/or Adjusting a Back Guy.** The back guy anchor will be installed as per the manufacturer's installation instructions. The back guying will be as directed by the Engineer.

**860.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for installing and relocating wood poles and installing, removing and/or adjusting back guys and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**860.04.01 Furnish and Install 40 Foot Wood Pole** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for furnishing and installing a wood pole and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**860.04.02 Furnish and Install Back Guy** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for furnishing and installing back guys, guy guards, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

The span wire used in the installation of the back guying of any type pole will be measured and paid for as specified in Special Provision 819.

**860.04.03 Adjust Existing Back Guy** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for making all adjustments to the existing back guys and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

The span wire used in the adjusting of the back guying of any type pole will be measured and paid for as specified in Special Provision 819.

**860.04.02 Removal of Existing Back Guy** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for removal disposal of all materials related to the removal of an existing back guy and anchors and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

This item will not be measured when the back guy is to be removed as part of item – Remove and Dispose of Existing Signal Equipment per Assignment.

**CATEGORY 800  
TRAFFIC**

**SECTION 861 - INSTALLING VIDEO DETECTION CABLING AND  
INSTALLING VIDEO DETECTION CAMERA AND HOUSING**

**861.01 DESCRIPTION.** This work shall consist of installing video detection cabling and installing video detection camera and housing as specified in the contract documents or as directed by the engineer.

**861.02 MATERIALS.**

Video Detection Cabling	As supplied by Baltimore County.
Video Detection Camera and Housing	As supplied by Baltimore County.
Mounting Hardware	As supplied by Baltimore County.

**861.03 CONSTRUCTION.**

**861.03.01 Installing Video Detection Cabling.** The video detection cabling shall be installed from the location of the video camera and housing location to the termination of the cable in the control cabinet. A ten (10) feet coil of wire should be left at both ends of the cable to allow the County forces to complete the installation of the cabling.

**861.03.02 Installing Video Detection Camera and Housing.** The video detection camera and housing will be installed as per the manufacturer's installation instructions. The placement of the video detection camera and housing will be as per the plans or as directed by the Engineer.

County forces will be responsible for completing the termination of all cables at the camera and in the control cabinet. The Contract will make sure that the camera and housing are mounted securely and has a ten (10) foot coil of additional cable at both the camera mounting location and control cabinet location.

**861.04 MEASUREMENT AND PAYMENT.** The payment will be full compensation for installing the video detection cabling and installing video detection camera and housing (including the mounting of the camera and housing to the traffic signal structure) and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**861.04.01 Installing Video Detection Cabling** will be measured and paid for at the Contract unit price per linear foot. The payment will be full compensation for installing the video detection cabling and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**861.04.02 Installing Video Detection Camera and Housing** will be measured and paid for at the Contract unit price per each. The payment will be full compensation for installing video detection camera and housing (including the mounting of the camera and housing to the traffic signal structure), and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

**CATEGORY 800  
TRAFFIC**

**SECTION 862 GALVANIZED TRAFFIC SIGNAL PEDESTRIAN POLES**

**DESCRIPTION.** This work shall consist of furnishing and installing a four (4) inch galvanized steel conduit for pedestrian pushbutton pedestals at locations specified in the Contract Documents or as directed by the Engineer.

**MATERIALS.**

Four inch galvanized steel conduit  
Four inch galvanized steel conduit cap  
A pedestrian pushbutton sign as specified on the signal drawing  
A pedestrian pushbutton  
Conduit as specified on the signal drawing  
Concrete Foundation as specified in the Ped. Push Button Pole Detail

**Pedestrian Pushbutton Poles**

Refer to Detail on Ped. Push Button Pole Detail.

**MEASUREMENT AND PAYMENT.**

**Furnishing and Installing** galvanized traffic signal pedestrian pushbutton poles.

Pedestrian pushbutton poles will be measured and paid for at the Contract unit price per each pedestrian pushbutton pole furnished and installed as specified in the Contract Document. The payment will be full compensation for furnishing and installing of the four (4) inch galvanized steel conduit and cap, the pedestrian pushbutton sign, the pedestrian pushbutton, the concrete foundation, and all materials, labor, equipment, tools and incidentals necessary to complete the work.

Conduit will be measured and paid for as specified in Section 805.

**CATEGORY 800  
TRAFFIC**

**SECTION 875- UTILITY CONNECTIONS AND  
UTILITY CONSTRUCTION STAKEOUT**

**DESCRIPTION.** This work shall consist of utility connections, utility stakeout, and construction stakeout as specified in the Contract Documents or as directed by the Engineer.

The Contractor's attention is called to the requirements of sections GP – 5.05, GP 7.13, and GP 7.17 of the Maryland Department of Transportation General Provisions for Construction Contracts.

**MATERIALS.**

Disconnect Switches and Utility Connections

950.13.10

**CONSTRUCTION.** The Contractor shall arrange a meeting with the utility company representatives, the Engineer and the Inspector as specified in the Contract Documents to establish a schedule for utility connections before any control equipment or material is installed.

The Contractor shall stakeout the proposed construction as indicated on the Plans and allow the County Inspector to verify the locations of all proposed facilities before construction begins. Existing utilities have been generally located and shown on the Plans, as they are believed to exist; however, the County assumes no responsibility for the accuracy of these locations.

The Contractor shall notify the appropriate agencies listed below within a minimum of 72 hours (excluding weekends and holidays) in advance of the Contractor's anticipated beginning of any underground work.

- (a) Request a MISS UTILITY (1-800-257-777) stakeout and possess a valid MISS UTILITY clearance ticket number for any underground work.
- (b) Contact all utilities within the limits of the project that are not a member of MISS UTILITY and obtain a stakeout of their respective facilities.

- (c) Request the Baltimore County Traffic Signal Operations to stakeout County maintained traffic signal facilities. They may be contacted at 410-887-8601 between the hours of 7:30 a.m. to 4:00 p.m.
- (d) Request the Office of Traffic and Safety Signal Operations Section to stakeout Maryland State Highway Administration maintained traffic signal facilities. They may be contacted at 410-787-7650 between the hours of 7:30 a.m. to 4:00 p.m.
- (e) Request the County and/or Administration's District Utility Engineer to stakeout their lighting facilities.

The Contractor shall plan the work to minimize interference with any existing traffic control device.

Should the Contractor, during construction, encounter any underground or overhead utilities that were not previously known the Contractor must notify the Engineer immediately. The Contractor shall also take all necessary precautions to protect all utilities and maintain continuance of service until said utilities can be relocated.

The Contractor shall locate all existing utilities and be responsible for their safety. Should any utilities become damaged or destroyed due to operations of the Contractor, the damage or destroyed components shall be replaced or repaired as necessary to restore the utility to a satisfactory operating condition. These repairs or replacements shall be at no additional expense to the County or the owner of the utility company. The Engineer should be notified immediately of any damage to existing utilities or traffic control devices. The Contractor shall also take all necessary precautions to protect all utilities and maintain continuance of service, if possible, until said utilities can be repaired by the Contractor or by owner of said utility.

Existing signals shall remain in their original condition until the new signals have been completed, satisfactorily tested and its operation accepted by the Engineer.

The Contractor shall not disconnect, de-energize, reconnect, tamper with, or otherwise handle any of a utility company's facilities. The Contractor shall be responsible for the utility service connection to the utility company supplied point of service. The Contractor is responsible to apply for and electrical permit from Baltimore County Permits and Development Management (PADM) and have the service inspected and approved by that agency.

The Contractor shall make the necessary arrangements with the utility companies to insure having needed utilities available at the time of turn on. Any utility energization, connection or disconnection delays will not be considered a valid reason for any work time extension claim. Difficulties in securing utility company services are to be reported to the Engineer at the earliest possible time.

### **MEASUREMENT AND PAYMENT.**

**Utility Connection.** Utility control and distribution equipment connections will be measured and paid for as specified in 807.04.01.

All utility company energization, connection or disconnection costs will be the responsibility of the Baltimore County Bureau of Traffic Engineering and Transportation Planning.

It shall be the Contractor's responsibility to obtain any electrical permits and arrange for final inspection, through the County's Department of Environmental Protection for all installation of electrical services. Payments for such services shall be incidental to the item associated with installation of the control and distribution.

The application, inspection and approval of the electrical permit from Baltimore County's PADM will not be measured, but the cost will be incidental to other pertinent items as specified in the Contract Documents.

Prior to the turn-on of a traffic signal system, the County will have formally notified the appropriate electric utility company and arrange for service. The general location of the service drop will be shown on the Plans or sketches that accompany individual work orders. It is the responsibility of the Contractor to notify the utility company several days before turn-on, so that the service power feed may be installed and the meter be provided.

For some traffic signal installations, it may be necessary to secure cables or equipment to existing utility poles. In this event, the County will secure a formal Attachment Agreement with the appropriate utility company. In performing such attachments, the Contractor shall adhere to the locations and attachment methods detailed in the agreements.

**Utility Construction Stakeout.** Utility Construction Stakeout will not be measured, but the cost will be incidental to other pertinent items as specified in the Contract Documents.

All expenses likely to be incurred by the Contractor as a result of working around or protecting utilities as well as cooperating with the owners of the utility will not be measured, but the cost will be incidental to other pertinent items as specified in the Contract Documents.

**CATEGORY 900  
MATERIALS**

**SECTION 950 - TRAFFIC MATERIALS**

On page 721 of the Standard Specifications.

**950.13.10 Disconnect Switches and Utility Connections.**

**INSERT:** After first paragraph and before the second paragraph.

Unless otherwise specified in the Contract Documents, the disconnect external switch mechanism handle shall have provisions to be secured in the **ON** position by a padlock furnished by the County.

**CATEGORY 900  
MATERIALS**

**SECTION 950 — TRAFFIC MATERIALS**

On page 714 of the Standard Specifications.

**950.06 ELECTRICAL CABLE AND WIRE.**

**CHANGE:** In the first line the terminology "ELECTRICAL CABLE AND WIRE" to read "ELECTRICAL AND COMMUNICATION CABLE, ELECTRICAL WIRE."

**950.06.04 Ground Wire and Rods.**

**CHANGE:** In the first line, "Ground wire shall be of the size...in the Contract Documents." to "Ground wire shall be a bare 6 AWG medium drawn copper wire with 7 strands."

On page 715 of the Standard Specifications.

**950.06.08 Voice grade Communication Cable.**

**CHANGE:** In the first line the terminology "Voice Grade Communication Cable," to read "Communication Cable."

**ADD:** After the first paragraph.

Overhead communication cable hardware shall be non-corroding, standard type telecommunication currently used in industry for overhead installation. Overhead communication cable in-line attachment suspension clamps shall be designed for "Figure Eight" cable having 1 bolt design with a "J-hook" for installation and include a through-bolt of the size and length required by the utility pole owner. Overhead communication cable suspension hardware, for other than for in-line use, shall be appropriate to the "turning angle" of the cable at the point of the installation, including the use of corner suspension clamps where necessary and shall include a through-bolt of the size and length required by the utility pole owner. Strandvise devices shall not be used.

Identification tag shall conform to 810.03.05. On corner and turning angles the tag shall be secured to the hardware with a stainless steel self-cinching cable tie. Identification tag shall be made of brass and read "Balt. Co. Traffic" and of the size 1-1/4 inch x 1-1/4 inch.

**950.06.09 Electric Service Wire.**

**DELTE:** In its entirety

**INSERT:** The following.

Electric service wire for traffic signals, intersection control beacons, and hazard identification beacons, shall have three individual type 4 AWG THWN wires and shall be 19 stranded. Electric service wire for luminaries mounted on traffic signal structures shall have a two conductor 12 AWG THWN wires and each wire shall be 7 stranded. Electric Service wire color identification by spray paint, tape, heat shrink tubing or any other after manufacturing method will not be accepted in conforming to the specified color requirements.

**CATEGORY 900  
MATERIALS**

**SECTION 951 — PAVEMENT MARKING MATERIALS**

**951.01 FAST-DRY NONTOXIC WATERBORNE PAINT (60-second no-track).**

Material shall be a ready-mixed, pigmented binder emulsified in water and capable of anchoring reflective beads which are applied separately.

Paint shall not contain any hazardous material listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1, and shall be compatible with cleaning solvents used in equipment cleaning.

**951.01.01 Paint Physical Requirements.** Paint shall conform to the manufacturer's formulations and shall be controlled from batch to batch. Unless otherwise noted, paint shall be tested in conformance with Federal Test Method Standard No. 141, and shall conform to the requirements listed below.

The Contractor shall provide the Administration with the manufacturer's certified analysis in conformance with TC-1.02 of the Standard Specifications. The manufacturer shall directly provide a certified analysis in conformance with TC-1.02 when materials are purchased by the Administration.

**(a) Viscosity.** Viscosity shall be  $80 \pm 10$  KU when tested in conformance with D 562 at 77 F.

**(b) Directional Reflectance.** Directional reflectance, when determined without reflective beads, shall be a minimum of 80 percent for white and 50 percent for yellow when tested in conformance with E 97.

**(c) Color.**

**(1) Production.** The color of the dry paint film of the production sample shall essentially match the color chips (Nos. 37886 or 33538) in Federal Standard 595 when compared instrumentally.

**(2) Control.** Control sample color matching determinations will be made using a Pacific Scientific Color Machine and the C.I.E. Chromaticity Coordinate Color Matching System under light source Illuminate C, with the following tolerances permitted between the standard chip and the dry paint film sample:

	STANDARD CHIP		DELTA TOLERANCE	RANGE
WHITE (37886)	X	0.330	$\pm 0.020$	0.310 - 0.350
	Y	0.340	$\pm 0.020$	0.320 - 0.360
YELLOW (33538)	X	0.480	$\pm 0.030$	0.450 - 0.510
	Y	0.450	$\pm 0.030$	0.420 - 0.480

(d) **Dry Opacity.** Dry opacity shall have a minimum contrast ratio of 0.98 when tested in conformance with Federal Test Method 4121, Procedure B using a 0.015 in. Bird Applicator or 0.030 Doctor Blade.

(e) **Bleeding Ratio.** Bleeding ratio shall be a minimum of 0.95 when tested as specified in Federal Specification TT-P-85, Modified. The asphalt-saturated felt shall conform to Federal Specification HH-R-590 or HH-R-595.

(f) **Flexibility.** The pigmented binder shall not display cracking or flaking when subjected to the flexibility test of TT-P-85, with the exception that the panels shall be 35 to 31 gauge (0.0078 to 0.0112 in.) tin plate approximately 3 x 6 in. The tin plates shall be lightly buffed with steel wool and thoroughly cleaned with solvent and dried before being used for the test.

(g) **Total Solids.** Total solids shall be a minimum of 70 percent by weight when tested in conformance with Federal Test Method 4041.1, Volatile and Nonvolatile Content (ordinary lab oven).

(h) **Settling Rate.** Settlement rating shall not be less than 8 when tested in conformance with Federal Test Method 4208 and the following:

The 1 pt sample containers will be visually inspected, resealed, and placed in an inverted position for one hour. They will then be set upright for at least one hour, and then stored without vibration for five days in an oven maintained at 120 F. The test will be conducted after the containers have been allowed to cool at room temperature for four hours.

(i) **Weight per Gallon.** The weight per gallon shall be within  $\pm 0.3$  lb/gal of the sample of the material which was tested on the NTPEP Northeast Test Deck.

**951.01.02 Reflective Bead Physical Requirements.** Each lot of beads shall be sampled in conformance with the MSMT Sample Frequency Guide and shall be submitted to the Laboratory for testing and approval prior to use.

Reflective beads shall conform to M 247 and the following:

GRADATION SIEVE SIZE	PERCENT PASSING		
	Bead Blend	Standard Beads	Large Beads
12 (1.70 mm)	100		100
14 (1.40 mm)	98 - 100		95 - 100
16 (1.18 mm)	48 - 70		80 - 95
18 (1.00 mm)	28 - 50		10 - 40
20 (0.85 mm)	5 - 25	100	0 - 5
30 (0.60 mm)	0 - 5	75 - 95	
50 (0.30 mm)		15 - 35	
100 (0.15 mm)		0 - 5	

- (1) **Refractive Index.** Reflective beads shall be colorless, clean, transparent, and free of milkiness or excessive air bubbles. The refractive index shall be 1.50 to 1.52 when tested in conformance with MSMT 211.
- (2) **Roundness.** Reflective beads shall be smooth, spherical in shape, free of sharp angular scars, scratches, or pits, and shall contain a minimum of 60 percent silica. Beads shall have a minimum average roundness of 75 percent when tested in conformance with D 1155, Procedure A. Beads larger than 20 mesh will be tested by visual examination.
- (3) **Adherence Coating.** Reflective beads shall be coated for adherence and embedment, and shall "pass" when tested as specified in MSMT 619. Moisture resistant coating will not be required.

**951.01.03 Prequalification.** Paint manufacturers desiring to have their paint formulations approved for application on the Administration's roadways shall have their formulations evaluated on the National Transportation Product Evaluation Program (NTPEP) Northeast Test Deck for pavement marking materials. This evaluation shall be performed at 6-month intervals. Only those formulations which are approved for use will be considered candidates for selection.

When test data from the NTPEP Northeast Test Deck has been compiled and evaluated, a list of formulations conforming to all criteria will be prepared by the Structures and Pavement Inspection Division and the Laboratory of the Administration's Office of Materials and Technology. Only the NTPEP results will be considered.

**951.01.04 Material Acceptance.** Only Laboratory approved and stamped materials conforming to this Specification shall be used. For materials purchased by the Administration, any deviation from specifications shall result in a rejection of the entire batch. Materials shipped without prior approval shall be retrieved at no expense to the Administration.

Final acceptance for paints purchased for application by Administration personnel shall be contingent upon successful application and drying of the paint when applied by one of the Administration's Linestriping paint trucks. Therefore, prior to the award, the successful bidder shall furnish and deliver 200 gallons of each color of paint to a location designated by the Administration's Office of Maintenance for testing.

The paint manufacturer shall provide access for the Administration's representative to collect samples of the paint from each production batch. Each sample shall be accompanied by a certified analysis in conformance with TC 1.02, showing compliance with the physical and chemical requirements of this Specification, the recommended paint temperature at the spray gun, and certification that any paint supplied during the Contract period shall be identical in composition to the material submitted for initial testing. Conformity with these requirements will be determined by the Laboratory. The paint manufacturer shall reimburse the Administration for the cost of sampling and shipment of the samples if sampled by the Administration's representative.

**951.01.05 Composition.** Samples of shipments will be subject to random tests such as X-ray analysis, infrared spectroscopy, ultraviolet spectral analysis, atomic absorption spectroscopy, etc.

**951.01.06 Certification.** The manufacturer shall certify that any paint supplied during the Contract conforms to the identical formulation as the samples submitted for evaluation on the NTPEP Northeast Test Deck, and identify the formulas by referring to the code used on the deck. Any paint which fails to conform to the identical formulation on the Northeast Test Deck will be rejected.

The Contractor or the manufacturer (when purchased by the Administration) shall also provide the following:

- (a) Certification in conformance with TC-1.02.
- (b) Material Safety Data Sheets for all materials submitted for testing and use.
- (c) The name or the type of colorant material used to make the nonleaded yellow color to indicate compliance with this Specification. The Administration will keep the paint composition and chemical analysis information confidential.
- (d) Application temperature ranges and optimum temperatures of paints for fast drying when measured at the spray gun nozzle.
- (e) A facility, in operation, capable of producing the paint in the quantity and quality required by the Administration.
- (f) A laboratory capable of performing the required tests. This laboratory will be subject to the Administration's approval.

**951.01.08 Administration Purchased Materials.**

**Delivery.**

- (a) **Paint.** Paint shall be supplied in 55 gal drums conforming to IC Specification 17-h, with removable lids. Lids shall have reusable, leak-proof gaskets and outside locking rings or clamps.

Each drum shall contain 50 gallons of paint based on volume at 77 F. Material information, including color, shall be clearly marked on the outside of each drum.

Paint shall not skin, curdle, settle or be unusable or difficult to apply within 12 months of the date of manufacture.

For the duration of the Contract, the successful bidder shall have the capability of delivering a minimum of 3000 gals of the required paint within 15 calendar days after receipt of a purchase order. A purchase order shall be deemed to be received by the Vendor on the day sent when submitted by facsimile transmission. Deliveries to the Administration facilities shall be made between 7:30 AM and 3:00 PM any day except Saturday, Sunday, and legal holidays.

**(b) Reflective Beads.** Reflective beads shall be shipped in 50 lb., moisture resistant bags, with complete identification information imprinted on the outside.

Reflective beads shall not absorb moisture in storage, and shall remain free of clusters or lumps for a minimum of 12 months from the date of manufacture.

For the duration of the Contract, the successful bidder shall have the capability of delivering a minimum of 44 000 lbs. of the required reflective beads within 15 calendar days after receipt of a purchase order. A purchase order shall be deemed to be received by the Vendor on the day sent when submitted by facsimile transmission. Deliveries to the Administration facilities shall be made between 7:30 AM and 3:00 PM any day except Saturday, Sunday, and legal holidays.

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**(c) Notification of delivery.** A notification of delivery and estimated time of arrival shall be given to the specific delivery location at least two working days prior to the expected delivery date. Failure to provide proper notification may result in a lengthy unloading delay, which will be at no additional cost to the Administration.

**Liquidated Damages.** Delivery shall be made within 15 calendar days after receipt of a purchase order.

With the understanding that pavement markings are a traffic safety delineation device, and that the Administration has a responsibility to the motoring public to ensure that adequate markings are present at all times, it follows that late deliveries of pavement marking materials could indirectly result in hazardous driving conditions for those motorists.

Inasmuch as this responsibility can be very expensive to maintain, the Administration will deduct the sum of \$300.00 per day from moneys due the Vendor, not as a penalty, but as liquidated damages for each scheduled shipment not delivered within the time specified. Saturdays, Sundays, and legal holidays will be excluded from the computations for the assessment of Liquidated Damages.

Failure to deliver within the specified period shall automatically constitute sufficient reason to allow the Administration to obtain comparable material on the open market. Any increased cost over the Contract price will be charged to the Contractor's account.

**CATEGORY 900  
MATERIALS**

**SECTION 951 — PAVEMENT MARKING MATERIALS**

**951.02 LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS.** All materials composing the reflective thermoplastic material shall be lead free. Reflective thermoplastic material shall be homogeneously composed of pigment, filler, resins and glass beads and shall conform to the following.

**951.02.01 Reflective Thermoplastic Components.**

**(a) Composition.**

COMPONENT	TEST METHOD	COLOR	
		WHITE	YELLOW
Binder, % min	Certified	18.0	18.0
Premixed Reflective Beads, % min	MSMT 614	30.0	30.0
Titanium Dioxide, % min	X-Ray Fluorescence	10.0	N/A
Calcium Carbonate Inert fillers, % max	D 34	42.0	*
Yellow Pigment, %	—	N/A	*

\* Amount of yellow pigment, calcium carbonate and filler shall be at the option of the manufacturer, provided all other requirements are in conformance.

**Restrictions.** The combined total of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 ppm when tested by X-Ray Fluorescence, ICP, or comparable method capable of this level of detection. Diarylide type pigments shall only be used when the manufacturer or pavement marking material application temperature does not exceed 392 F.

**(b) Binders.** The binder shall be alkyd consisting of maleic modified glycerolester of resin and other plasticisers.

**(c) Titanium Dioxide.** The titanium dioxide shall be rutile type..

**951.02.02 Reflective Thermoplastic.**

**(a) Physical Properties.**

TEST PROPERTY	TEST METHOD	SPECIFICATION LIMITS
Bond Strength, psi min.	MSMT 614	180
Cracking Resistance		No Cracks
Softening Point, F		215 ±15

**(b) Specific Gravity.** The specific gravity of the white and yellow pavement marking material shall be 1.7 to 2.2 when tested in conformance with D 153, Method A at 77 F.

**(c) Color.** After heating for 4 ±0.5 hours at 425 ±3 F, the thermoplastic shall be as specified in E 1347 and the following:

**(1) Production.** The color of the cured thermoplastic material film of the production sample shall match the Federal Standard 595 Color chips specified when compared by instrumental measurement.

**(2) Control.** Control color matching determinations will be made using a Pacific Scientific Color Machine, and an observation angle of 2°, and the CIE Chromaticity Coordinate Color Matching System under light source Illuminate C, with the following tolerances permitted between the standard chip and the cured thermoplastic film sample:

	WHITE Color No. 17886		YELLOW Color No. 13538	
	X	Y	X	Y
Standard Chip	0.310	0.330	0.480	0.450
Delta Tolerance	±0.020	±0.020	±0.030	±0.030

**(3) Reflectance.**

COLOR	TEST METHOD	DAYLIGHT REFLECTANCE at Degree	PERCENT MIN
White	Fed Std 595 No. 17886	45 - 0	80
Yellow	Fed Std 595 No. 13538	45 - 0	50

(d) **Yellowing Index.** The yellowing index of the white material shall not exceed 8 prior to QUV and 15 after QUV when tested in accordance with E 313.

**951.02.03 Glass Beads Physical Requirements.** The glass beads shall conform to M 247 and the following:

GRADATION SIEVE SIZE	PERCENT PASSING
	STANDARD BEADS
0.85 mm (No. 20)	100
0.60 mm (No. 30)	75 - 95
0.30 mm (No. 50)	15 - 35
0.15 mm (No. 100)	0 - 5

Glass beads shall be colorless, clean, transparent, and free of milkiness, excessive air bubbles, and essentially free of sharp angular scarring or scratching. The beads shall be spherical in shape and shall contain a minimum of 60 percent silica. Roundness shall be 75 percent minimum when tested as specified in D 1155, Procedure A.

Glass beads shall have a 1.50 minimum refractive index when tested in conformance with MSMT 211.

Glass beads shall not absorb moisture in storage and shall remain free of clusters or lumps.

**951.02.04 Field Testing.** Materials conforming to this specification shall be field evaluated at the National Transportation Product Evaluation Program (NTPEP) Northeast test deck for performance. Materials performing satisfactorily throughout the test period will be placed on the Administration's Prequalified Materials List. All marking materials supplied during the Contract shall be identical in composition to the materials submitted for initial testing. Conformity with these requirements will be determined by the Office of Materials and Technology (OMT).

**951.02.05 Sampling for Preapproval.** Sources supplying thermoplastic material and glass beads shall be submitted by the Contractor to the Engineer for approval in conformance with the Contract Documents.

Each lot of thermoplastic material will be sampled at the source and tested by the Administration over two construction seasons. If 95 percent of the lots tested conform to Specifications, source samples will no longer be required and the manufacturer may ship directly to the project. All shipments shall be accompanied by a manufacturer's certification in conformance with TC-1.02 and shall include the following:

- (a) Manufacturer's name.
- (b) Place of manufacture.
- (c) Material color.
- (d) Date of manufacture (month-year).
- (e) Lot identification.
- (f) Size/quantity of lot represented.

Random samples will be taken on the project in conformance with the MSMT Sample Frequency Guide and tested for conformance with these specifications. Nonconformance may result in the suspension from the certification program until conformance is reestablished. To reestablish conformance, the manufacturer shall achieve a 95 percent approval level from samples taken at the manufacturer's facility and tested by the Administration prior to shipment to Administration projects.

Each lot of glass beads shall be sampled in conformance with the MSMT Sample Frequency Guide and shall be submitted to the OMT for testing and approval prior to use.

Sampling will be by batch or lot which is defined as a maximum of 44 000 lbs of material.

**951.02.06 Certification.** The Contractor shall furnish notarized certification as specified in TC-1.02. The manufacturer shall certify that any reflective thermoplastic materials supplied during the Contract conforms to the identical formulation as the samples submitted for evaluation on the NTPEP Northeast test deck, and identify the formulas by referring to the code used on the deck. Reflective thermoplastic materials which fail to conform will be rejected.

The manufacturer shall also provide the following:

- (a) Material Safety Data Sheets for all materials submitted for testing and use.
- (b) A facility, presently in operation, capable of producing the reflective thermoplastic materials in the quantity and quality required by the Administration.
- (c) A laboratory subject to the Administration's approval which is capable of performing the required tests.

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**SECTION 951 PAVEMENT MARKING MATERIALS**

**951.04 REMOVABLE PREFORMED PAVEMENT MARKING MATERIAL.** Removable preformed pavement marking material shall remain in place on the pavement surface without being displaced by traffic or affected by weather conditions. The material shall be capable of being removed without the use of heat, solvents, grinding or sand blasting, and shall not leave an objectionable residue.

The material shall be of good appearance and free from cracks. Edges shall be true, straight and unbroken. Line marking material shall be in rolls having no more than three splices per 150 ft of length. All marking materials shall be packaged in conformance with accepted commercial standards and shall have a minimum shelf life of one year.

**951.04.01 White and Yellow.** Removable preformed pavement marking materials shall conform to the requirements of the Manual on Uniform Traffic Control Devices (MUTCD) latest edition and the following:

- (a) **Composition.** The marking material shall consist of a mixture of polymeric materials, pigment and glass beads distributed uniformly throughout the surface.
- (b) **Color.** The color of the marking materials shall match Federal Test Standard No. 595A, latest edition for the following:
 

White	-	17778
Yellow	-	13538
- (c) **Glass Beads.** Glass beads shall conform to the General Requirements of M 247 and have a minimum refractive index of 1.90 when tested as specified in MSMT 211.
- (d) **Frictional Resistance.** The British Pendulum Number shall be a minimum of 50 when tested as specified in E 303.
- (e) **Certification.** Samples submitted to the Office of Materials and Research (OMR) for testing shall be accompanied by the manufacturer's certified analysis in conformance with TC-1.02.
 

Any material supplied for a Contract shall be identical in composition to the material originally submitted for testing. Conformity will be determined by OMR.
- (f) **Field Testing.** Line marking materials conforming to the Contract Documents will be field tested over an 180 day period as specified in MSMT 723 for conformance with the following:
  - (1) Ease of Application - satisfactory.
  - (2) Removability - a minimum rating of 2.
  - (3) Residue Remaining at Time of Removal (day & night) - minimum rating of 2.

(4) Durability, Appearance and Night Visibility - minimum weighted rating of 4.

(5) Loss or movement - minimum rating of 2.

Upon satisfactory completion of the field testing, the marking materials will be placed on the OMR's Prequalified Materials List. The material shall conform to all criteria for a minimum period of 120 days to be considered satisfactory.

#### 951.04.02 Black.

**Composition.** The nonreflective, patterned black line masking tape shall not contain metallic foil and shall consist of a mixture of high quality polymeric materials, pigments and inorganic fillers distributed throughout its base cross-sectional area, with a matte black nonreflective top layer. The patterned surface shall have a minimum of 20 percent of the surface area raised and coated with nonskid particles. The channels between the raised areas shall be substantially free of particles. The film shall be precoated with a pressure sensitive adhesive. A nonmetallic medium shall be incorporated to facilitate removal.

**Skid Resistance.** The surface of the patterned, nonreflective black line mask shall provide an initial average skid resistance value of 60 BPN when tested in conformance with E 303.

**Thickness.** The patterned material, without adhesive, shall have a minimum caliper of 0.065 in. at the thickest portion of the patterned cross-section, and a minimum caliper of 0.02 in. at the thinnest portion of the cross-section.

**Adhesion.** The manufacturer shall demonstrate that the properly applied black line mask adheres to the roadway and existing stable roadway markings under climatic and traffic conditions normally encountered in the construction work zone.

**Removability.** The manufacturer shall show that the black line mask can be manually removed after its intended use, intact or in large pieces, at temperatures above 40 F without the use of heat, solvents, grinding or sand or water blasting. The black line mask shall remove cleanly from existing markings that are adequately adhered to the pavement surface.

**Performance Requirements.** When applied in accordance with the of the manufacturer's recommendations, the black line mask shall provide a neat, durable masking that will not flow or distort due to temperature if the pavement surface, or underlying markings remain stable. The black line mask shall be weather resistant and, through normal traffic wear, shall show no lifting or shrinkage which will significantly impair the intended usage of the tape throughout its useful life, and shall show no significant tearing or other signs of poor adhesion.

**Packaging.** Preformed pavement markings shipping package shall conform to the manufacturer's shipping requirements to prevent damage during delivery and unloading of all shipments. The shipping package shall be marked with the following information placed on each container:

(a) Description of item.

(b) Date of manufacture.

(c) Successful Bidder's Name.

(d) Purchase Order Number.

(e) Lot Number.

(f) Color.

(g) Installation Instructions.

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**SECTION 951 PAVEMENT MARKING MATERIALS**

**951.06 HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING MATERIAL.** The material shall be highly durable retroreflective polymeric materials designed for use as transverse lines, numbers, legends, symbols and arrow markings subjected to high traffic volumes and severe wear conditions such as shear action from crossover or encroachment.

The applied material shall adhere to hot mix asphalt (HMA), open-grade friction courses (OGFC), stone matrix asphalt (SMA), portland cement concrete (PCC), and any existing pavement markings when applied using normal heat from a propane fueled heat gun in conformance with manufacturer's recommendations.

The applied material shall be capable of conforming to pavement contours, breaks and faults, shall not be affected by weather conditions, and shall remain in place on pavement surfaces without being displaced by traffic.

The material shall have a minimum shelf life of one year.

The material shall conform to the requirements of the MUTCD and the following:

**(a) Composition.** The material shall consist of polymeric materials, pigments, binders and glass beads distributed throughout the entire cross-sectional area. The thermoplastic material shall conform to M 249 with the exception of the relevant differences for the material being supplied in the preformed state.

**Restrictions.** The combined total of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 ppm when tested by X-ray diffraction, ICP, or comparable method capable of this level of detection. Nonleachable lead based pigments will not be permitted. Diarylide type pigments shall only be used when the manufacture or pavement marking material application temperature does not exceed 392 F.

**(b) Color.** Preformed markings shall consist of film with pigments selected and blended to match Federal Standard 595 color chip Nos. 17778 and 13538 for white and yellow respectively.

**(c) Frictional Resistance.** The surface of the applied material shall provide a minimum average skid resistance value of 50 BPN when tested in conformance with E 303.

**(d) Patchability.** The material shall be capable of use for patching worn areas of the same type in conformance with manufacturer's recommendations.

**(e) Thickness.** The minimum thickness, without adhesive, shall be 120 mils.

**(f) Adhesion.** The material shall retain a minimum of 65 percent (65%) adhesive bond after 100 cycles of freeze-thaw when tested in conformance with C 666, Method B.

**(g) Beads.**

**(1) Index of Refraction.** All beads shall meet the general requirements of M 247, Type I, and shall have a minimum index of refraction of 1.50 when tested using the liquid oil immersion method specified in MSMT 211.

**(2) Acid Resistance.** A maximum of 15 percent (15%) of the beads shall show a formation of a distinct opaque white layer on the entire surface after exposure to a 1 percent solution (by weight) of sulfuric acid in conformance with MSMT 211.

**Field Testing.** Materials conforming to this Specification shall be field tested at AASHTO regional test facilities, such as National Transportation Product Evaluation Program (NTPEP), for performance.

Materials performing satisfactorily throughout the test period, including exhibiting a minimum retained reflectance of 100 mcd/m<sup>2</sup>/lux at the completion of the testing, will be placed on the Prequalified Materials List maintained by the Office of Materials and Research.

**Certification.** Any marking material supplied during this Contract shall be identical in composition to the material submitted for initial testing. Samples submitted for testing shall be accompanied by the manufacturer's certified analysis in conformance with TC-1.02.