

SPECIFICATIONS

for

**CROSSWALK MARKING SYSTEM
CHESAPEAKE AVENUE**

**TOWN OF NORTH BEACH
CALVERT COUNTY, MARYLAND**

MAYOR AND TOWN COUNCIL

MARK R. FRAZER, MAYOR

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JULY 2017

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INVITATION FOR BIDS

Sealed bids for the Town of North Beach Chesapeake Ave. Crosswalk Project will be received until 2:00 p.m. prevailing time on Monday, August 1, 2017 at 2:00 p.m. and then publicly opened and read.

The Project includes the installation of imprinted aggregate thermoplastic paving system at crosswalks associated with four intersections and other location on Chesapeake Ave, between 1st and 7th Street.

Contract Documents are available at the Town's website site at: northbeachmd.org.

Stacy Wilkerson, Town Clerk
Town of North Beach

Run Dates

7/19

7/26

INFORMATION FOR BIDDERS

A. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

1. Work described herein shall be in accordance with the contract documents including the Contract Specifications and all attachments
2. Before submitting their bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions and on-going contracts that may in any manner affect performance of the Work, (c) determine to his own satisfaction the actual subsurface conditions including the character and type of soil and material he will encounter in the Work, (d) familiarize himself with Federal, State and local laws, ordinances, rules and regulations affecting performance of the Work; and (e) carefully correlate his observations with the requirements of the Contract Documents.

B. CONTRACT TIME

The number of days or the actual date for completion of the Work is set forth in the Notice to proceed for individual items of work to be completed under this Contract.

C. BID FORMS

1. The Bid Form and attachments are included in the Contract Specifications Book. Bids shall be submitted on the attached forms and shall be filled out in full, in ink or by typewriter. If changes and erasures are made, such changes and erasers shall be clear and legible, and shall be initialed by the person signing the Bid Form.

Please submit the following forms in the bid package:

a. Bid Form

The Bid Form may provide for submission of a price or prices for one or more items, which may be lump sum Bids, alternate prices, and scheduled items resulting in a Bid on a unit of construction or a combination thereof, or other Bidding arrangements. Unless specifically called for, alternate Bids will not be considered.

Bids in which the prices obviously are unbalanced may be rejected. Unbalanced prices shall be interpreted to mean that the unit price for any items is such that it is unreasonable for that particular item when considered by itself and not considered in connection with the bid submitted on any other item or items.

Bids shall be based on products, materials and methods named in the Contract Documents.

Detach completed Bid Form and required attachments and submit in a sealed, opaque envelope bearing the Bidder's name and address at the time and place indicated on the Invitation to Bid.

Bids may be modified or withdrawn at any time prior to the opening of bids.

Signing of Bids shall comply with instructions on the Bid Form.

2. The Bidder shall assume full responsibility for timely delivery at location designated for receipt of Bids. Bids received after the designated time for the public bid opening will be returned to the bidder unopened.

Oral, telephonic or telegraphic Bids are invalid and will not receive consideration.

3. Bids will be publicly opened and read aloud at the time and place set forth in the Invitation to Bid. Only bid totals will be publicly read at the Bid Opening. Bidders and other interested parties may be present either in person or by representative. Unit prices will be made available after verification by the OWNER.

In case of discrepancy between prices in writing and in figures, the writing shall govern. In case of error in the extension of prices in the Bid, unit prices will govern.

D. AWARD OF CONTRACT

1. The Owner reserves the right to reject any and all bids and waive any and all irregularities. The Owner may reject, as non-responsive, any and or all bids where bidders fail to acknowledge receipt of addenda as prescribed.
2. Award will be based on the prices bid for products, methods and materials named in the Contract Documents.
3. In evaluating Bids, the Owner will consider the qualifications of the Bidder.
4. The Owner reserves the right to reject the bid of any Bidder who does not pass any such evaluation to the Owner satisfaction.
5. If a contraction is to be awarded, it will be awarded to the responsible Bidder whose bid based on an evaluation by the Owner will be in the best interest of the Owner within 60 days after the day of the Notice to Proceed.
6. The Owner reserves the right to cancel the award of the contract at any time prior to execution of the contract without liability to the owner.

E. NOTICE TO PROCEED

1. After execution of the Contract, the ENGINEER will issue a Notice to Proceed for individual items of work to be completed under the Contract. The Notice to Proceed will set forth the start date for the work and the time or date by which the work must be completed.
2. Failure by the Contractor to start or complete the work listed in the Notice to Proceed by the times listed by the OWNER in the Notice to Proceed shall be construed as a Breach of Contract and may result in termination of the Contract by the OWNER

F. BIDDER QUALIFICATIONS

1. Performance Capability

Bidders shall be responsible and have the capability to properly perform classes of work contemplated according to the Contract terms, and shall have the necessary plant, expertise, manpower, equipment, and sufficient capital to execute the Work properly within the time specified.

3. Bid Submittal Limit

A Bidder may submit only one Bid for each Contract. More than one Bid from an individual, firm or partnership, corporation or association under the same or different names will not be considered on any given Contract, and will be considered grounds for disqualification of the Bids involved, and rejection of the Bids.

G. SUBSTITUTIONS

1. Whenever a material, article or method is specified or described by using the name of proprietary product or the name of a particular manufacturer or vendor, followed by the phrase "or equal", the specific item mentioned shall be understood as establishing the type, function, dimension, appearance and quality desired and is to be the basis upon which bids are to be prepared. Other manufacturer's materials, articles or method not named will be considered after Award of the Contract provided the Contractor submits the proposed substitutions on the Equipment and Material List with his bid, and provided the substitution will not require substantial revisions of the Contract Documents.
2. Whenever a material, article or method is specified or described without the phrase "or equal" no substitutions will be allowed.

H. RESTRICTIVE PRICING

1. Should any supplier, vendor, manufacturer or fabricator lump together two or more items of materials of equipment in his quotation to Bidders, whether they all be specified items or not, and refuse to provide quotations for individual items to any bidder so requesting, that supplier, vendor, manufacturer or fabricator may be excluded from participation in this project.

I. LAWS AND REGULATIONS

1. The bidder's attention is directed to the fact that all applicable Federal, State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. The bidder is assumed to have made himself familiar with all such rules and regulations which in any way affect the work, and no plea of misunderstanding will be considered on account of the ignorance thereof. If the bidder shall discover any provision in the plan, specification or other contract document which is contrary to, or inconsistent with, any such law, ordinance, rule or regulation; he shall forthwith report it to the ENGINEER in writing.

BID FORM
CROSSWALK MARKING SYSTEM
CHESAPEAKE AVENUE
TOWN OF NORTH BEACH

MADE this _____ day of _____, 20____,

By _____

Business Address _____

Telephone No. _____

I/WE, the undersigned bidder, declare that the only person, firm or corporation, or persons, firms or corporations, that has or have any interest in this proposal, or in the Contracts proposed to be taken, is or are the undersigned; that this proposal is made without any connection or collusion with any person, firm, or corporation making a proposal for the same work; that the attached specifications and form of contract and the drawings therein referred to, have been carefully examined and are understood; that as careful an examination has been made as is necessary to become informed as to the character and extent of the work required; and that it is proposed and agreed if the proposal is accepted, to contract with the Town of North Beach, in the form in the specifications and as shown by the drawings.

The following bid price(s) include and cover the furnishing of all materials and labor requisite and proper, and the providing of all necessary machinery, tools, apparatus and means for performing the work, and the doing of all the above mentioned work, in the manner set forth, described and shown in the specifications and on the contract drawings, within the prescribed time:

1. BASE BID

Item 1 (First Street): BIDDER agrees to provide all material and perform all work outlined within the contract documents to install 17 crosswalks 10' wide including 12" wide MUTCD Transverse lines, one on each side, and 2 crosswalks at 12' widening including MUTCD Transverse lines, one each side, with (XD street print or equal) imprinted Aggregate reinforced preformed Thermoplastic pavement (color colonial brick) and all associated stopbars:

- a. Line item #1 – Traffic Patterns (street print XD or equal) Aggregate reinforced stamped Thermoplastic (6,850 sq. ft.) For:

_____ and _____ Cents/sq. ft.

(in writing)

_____, or unit price of \$ _____/sq. ft.
(in figures)

b. Line item #2 – 12” wide MUTCD Transverse lines including stopbars (1,490/l.f.) For:

_____ and _____ Cents/l.f.
(in figures) (in writing)

Unit price of \$ _____/l.f.

c. Line item #3 (add alternate to part of item a) – Traffic patterns (street print XD or equal) Aggregate reinforced stamped Thermoplastic with white ladder (3,480 sq. ft.) For:

_____ and _____ Cents/sq. ft.
(in writing)

_____, or unit price of \$ _____/sq. ft.

ADDENDA NUMBER

ISSUE DATE

No successful Bidder may withdraw his bid.

Respectfully submitted,

Signature

Printed Name

Title

Date

AGREEMENT FORM

**THE TOWN OF NORTH BEACH
CROSSWALK MARKING SYSTEM
CHESAPEAKE AVENUE**

THIS AGREEMENT, made this _____ day of _____, 2017, by and between the Town of North Beach herein after called "Owner", and _____ of _____, MD hereinafter called "Contractor".

WITNESSETH, that the Contractor and the Owner for the considerations stated herein mutually agree as follows:

Article 1. Statement of Work. The Contractor shall furnish all supervision, technical personnel, labor, materials, machinery, tools, appurtenances, equipment and services, including utility and transportation services and perform and complete all work and required supplemental work for the completion of this Contract in strict accordance with the hereinafter referenced Contract Documents all as prepared by Stacy Wilkerson, Town Clerk and in these Contract Documents, referred to as the "Town Clerk".

Article 2. The Contract Price. The Owner will pay the Contractor for the performance of the contract Base Bid Work in current funds, for the total quantities of work performed at the prices stipulated in the bid for the respective items of work completed subject to additions and deductions as provided in the Section - Changes in Contract Price & Time in the General Conditions. The Contract price until modified will be

Article 3. Contract Documents. The Contract Documents shall consist of the following (including their attachments and exhibits):

- | | |
|---|------------------------------|
| a. This Agreement | g. General Conditions |
| b. Addenda | h. Technical Specifications |
| c. Invitation for Bids | i. Drawings |
| d. Instructions to Bidders | j. Certificates of Insurance |
| e. Signed copy of bid, with all attachment required for the bidding | |
| f. Special Conditions | |

Article 4. Time for Completion & Liquidated Damages. The Contractor hereby agrees to commence work under this Contract on or before the date specified in the written "Notice to Proceed" by the OWNER and to fully complete the work in accordance with the "Time for Completion and Liquidated Damages" as specified in the Contract Documents. The Contractor

further agrees to pay, as liquidated damages the amount specified for each consecutive calendar day thereafter that the work remains uncompleted.

This Agreement, together with other Documents enumerated in this Article 3, which said other Documents are as fully a part of the Contract as if hereto attached or herein repeated, forms the Contract between the parties hereto. In the event that there is a conflict in any provision in any component, the part first enumerated in this Article 3 shall govern, except as otherwise specifically stated.

IN WITNESS WHEREOF, the parties hereto have caused this AGREEMENT to be executed on the day and year first above written.

(Contractor)

By _____

Title _____

THE TOWN OF NORTH BEACH
(Owner)

By _____

Mark R. Frazer, Mayor

SPECIAL CONDITIONS TO THE CONTRACT

PART 1.0 - PROJECT DESCRIPTION

The Project includes the installation of crosswalk and stop bars at locations within the Town. The locations include First Street, Chesapeake Avenue at St. Anthony's Church, Second Street, Third Street, Fifth Street, Seventh Street intersections and mid block 2nd to 3rd Street.

PART 2.0 - CONTRACT DRAWING

Chesapeake Avenue Crosswalks Drawing dated: April 2017

PART 3.0 - CONTRACT TIME/LIQUIDATED DAMAGES

The work included in the PROJECT shall be commenced with one mobilization at the time stipulated by the OWNER in the Notice-to-Proceed (NTP) and shall be fully completed and ready for final acceptance by the OWNER within 60 calendar days. Liquidated damage shall be \$250 for each calendar day the work remains incomplete beyond the time specified.

PART 4.0 - MAINTENANCE AND PROTECTION OF TRAFFIC

The Contractor shall be responsible to maintain and protect traffic and pedestrians in the project area to the satisfaction of the Town of North Beach. The Contractor must maintain pedestrian and vehicular traffic and permit access to business, residences, at all times. A traffic maintenance plan shall be provided to the Town for approval two weeks prior to commencement of work. Notifications of any road or pedestrian access way shall be approved by the Town and provided for notifications two weeks prior. The Town will provide the initial vehicular maintenance of traffic in accordance with contractor approved plan.

GENERAL CONDITIONS

ARTICLE 1 MATERIALS, SERVICES AND FACILITIES

1.1 It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the Work within the specified time.

1.2 Manufactured articles, materials and equipment shall be new, and shall be stored, applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer, and as approved by the Engineer. Manufactured articles, materials and equipment shall meet all specified requirements, and their manufacturers and suppliers shall be approved by the Engineer before delivery to the Contract site. When manufactured articles, materials and equipment, and their manufacturers and suppliers are named in the Specifications, only those named will be considered and accepted.

1.3 Deliveries of material, equipment and supplies to the Contractor or Subcontractors at the contract site shall be specifically addressed to the Contractor or Subcontractor and not to the Owner or Engineer. Owner's or Engineer's personnel will not accept deliveries for the Contractor or Subcontractors.

1.4 Materials and equipment shall be stored to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located and stored to facilitate prompt and safe inspection. Temporary fence shall be provided, when required.

1.5 Materials, supplies and equipment shall be in accordance with samples, drawings and catalog cuts submitted by the Contractor and approved by the Engineer and shall not be delivered to the Work site prior to the Engineer's approval of samples and Contractor's drawings.

1.6 Materials, supplies or equipment to be incorporated into the Work shall be new and shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

1.7 All Work included in this Contract shall be performed in a skillful and workmanlike manner. The Contractor shall employ no plant, equipment, materials, methods or persons to which the Engineer objects.

ARTICLE 2 LAYOUT

2.1 The Contractor shall be responsible to provide all staking and layout for the work under this Contract.

ARTICLE 3 PROTECTION OF WORK, PROPERTY AND PERSONS

3.1 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall take all

necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

In case of suspension of Work for any cause, the Contractor shall be responsible for the Project and shall take such precautions as may be necessary to prevent damage to the Work, all material or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, provide for proper drainage, provide temporary heat, light, and other required utilities and services, and shall erect any necessary temporary structures, signs, or other facilities at his expense. In addition, the Contractor shall properly and continuously maintain in acceptable growing condition all living material in newly established plantings, seedings, and sodding furnished under this Contract, and shall take adequate precautions to protect new and existing growth against injury.

3.2 The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He shall notify owners of adjacent utilities when prosecution of the Work may affect them.

3.3 In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, shall act, at his discretion, to Prevent threatened damage, injury or loss.

3.4 When the Owner or Engineer has been notified of emergency situations requiring in the Owner's opinion, immediate attention and rectification, the Owner will so notify the Contractor. Should the Contractor not commence work to rectify the situation within one hour after notification, the Owner may perform the required work and deduct the costs thereof from monies owed the Contractor.

ARTICLE 4 SUPERVISION BY CONTRACTOR

4.1 The Contractor shall supervise and direct the Work. He shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor shall employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work as determined by the Owner.

ARTICLE 5 CORRECTION OF WORK

5.1 The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the Contract Documents whether incorporated in the construction or not, and the Contractor shall promptly replace and reexecute the Work in accordance with the Contract Documents and without expense to the Owner and shall bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

5.2 All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected Work within ten days after receipt of Written Notice, the Owner may remove such Work, store the materials and replace the rejected Work at the expense of the Contractor.

5.3 Any work which may be done or materials ordered by the Contractor prior to receipt of the Notice to Proceed, incorporation of previously rejected Work, work done contrary to or regardless of the instructions of the Engineer or Owner, work done beyond the limits shown on the Plans, except as herein specified or any extra work done without written authority from the Owner, will be considered as unauthorized and may not be paid for. Work so done may be ordered removed or replaced at the Contractor's expense.

ARTICLE 6 PAYMENTS TO THE CONTRACTOR

6.1 At least ten days before each progress payment falls due, the Contractor shall submit to the Project Manager a partial payment estimate, filled out in ink or typewritten and signed by the Contractor, covering Work performed during the period of the partial payment estimate and supported by such data as the Project Manager may reasonably require to include schedule updates. If payment is requested on the basis of materials and equipment not incorporated in the Work, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the Project manager, as will protect the OWNER's interests therein, including applicable insurance. . The Project Manager will, within ten days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate for processing, or return the partial payment estimate to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within 30 days of an Project Manager approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate. The Owner will retain ten percent of the amount of each payment until final completion and acceptance of all Work covered by the Contract Documents. The OWNER at any time after 50 percent of the Work has been completed, if it finds that satisfactory progress is being made, will eliminate retainage on the current and remaining estimates. When the Work is substantially complete, the retained amount may be further reduced to only that amount necessary to assure completion.

6.1.1 With each payment, the Contractor, when signing the payment form, certifies that he has made payment from proceeds of prior payments and that he will make timely payments from the proceeds of progress and final payment then due him, to his subcontractors and suppliers in accordance with his Contractual arrangement with them.

6.1.2 No payments for installation of equipment requiring Operation and Maintenance Manuals will be made prior to receipt of final approved copies of the Operation and Maintenance Manuals.

6.2 Payments shall be made for material or equipment not yet incorporated in the Work after delivery and stockpiling on the Contract site provided submittals have been received and accepted and the material is stored in accordance with the Contract Documents and as recommended by the manufacturer. Payment will not exceed manufacturer's invoice amount, less standard payment retention, and where equipment manuals are required, no payment will be made prior to approval of preliminary submittal of the Operations and Maintenance Manuals.

Material for which payment has been made, wholly or partially, shall not be removed from the Work site. Damage or loss of material and equipment remains the responsibility of the Contractor until the Certificate of Substantial Completion is issued. Payment for material and equipment shall not be construed as acceptance by the OWNER nor does it relieve the Contractor of the responsibility to incorporate material and equipment that complies with the Contract Documents. Contractor shall show evidence that he has paid the supplier of material and equipment prior to receiving the next payment.

- 6.3 Prior to making a request for final payment, the Contractor shall have completed all Work as defined in Article 1.34 herein, under the Contract.

The Project Manager will issue a certificate attached to the final payment request with a copy sent to the Contractor that the Work has been accepted by him under the conditions of the Contract Documents. The entire balance found to be due the Contractor, including the retained percentages but except such sums as may be lawfully retained by the OWNER, will be paid to the Contractor within 45 days of completion and acceptance of the Work.

- 6.4 The Contractor shall indemnify and save the OWNER's agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen and furnishers of machinery and parts thereof, equipment, tools and all supplies incurred in the furtherance of the performance of the Work. The Contractor shall, at the ENGINEER's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the Contractor fails to do so the OWNER may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor will be resumed in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the Contractor, his Surety, or any third party. In paying any unpaid bills of the Contractor, any payment so made by the OWNER will be considered as a payment made under the Contract Documents by the OWNER to the Contractor and the OWNER will not be liable to the Contractor for any such payments made in good faith.

ARTICLE 7 ACCEPTANCE OF FINAL PAYMENT AS RELEASE

7.1 The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner and Engineer from any and all claims of any nature, and the failure to mention a particular type of claim does not reflect an intention to allow the claim to survive, and all liability to the Contractor other than claims submitted as specified elsewhere in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with the Work and for every act and neglect of the Owner, Engineer and others relating to or arising out of this Work.

7.2 The Owner shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that any such measurement, estimate or certificate is untrue or is incorrectly made, nor from showing that the work or materials do not in fact conform to the Contract. The Owner shall not be precluded or estopped, notwithstanding any such measurement, estimate or certificate and payment in accordance therewith, from recovering from the Contractor or his Sureties, or both, such damage as it may sustain by reason of his failure to comply with the terms of the Contract.

7.3 Neither the acceptance by the Owner or any representative of the Owner nor any payment of or acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by the Owner, shall operate as a waiver of any portion of the Contract or of any power herein reserved, or of any right to recover damages. The waiver of any breach of the Contract shall not be held to be waiver of any other or subsequent breach.

ARTICLE 8 INSURANCE

8.1 The Contractor shall purchase and maintain insurance with companies acceptable to the Owner meeting requirements specified herein as will protect him from consequential liability which may arise out of or result from the Contractor's execution of the Work, whether done personally or by any Subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

8.1.1 Certificates of insurance shall be filed within ten (10) days after receipt of the Notice of Award. These certificates shall contain a provision that policy coverages will not be canceled, altered or materially changed without thirty days prior written notice provided to the Owner, via registered or certified mail, to the address below:

8.2 The Contractor shall provide the following:

8.2.1 General Liability Insurance

Such coverage to protect the Contractor and the Owner or Engineer from any claims which may arise out of or result from the Contractor's operations under the Contract, whether such operations be by the Contractor or by any Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

Such insurance shall include:

- a. Independent Contractor's coverage;
- b. Products and Completed Operations coverage;
- c. Blanket Contractual Liability coverage;
- d. Fire Legal Liability coverage;
- e. Broad Form Property Damage coverage;
- f. No Water Damage Exclusion;

g. The Comprehensive General Liability Policy shall contain an endorsement indicating that the XC (Explosion and collapse) exclusions applicable to a Contractor's Policy have been deleted for certain work. The XC exclusion shall be deleted on construction contracts for water mains, sanitary sewer and storm drain whenever explosives of any types are to be used to perform Work as set forth in the Contract, and when deemed necessary in the best interest of the Owner, and on construction Contracts for buildings and facilities under which

the Contractor will be constructing buildings and/or facilities. Policy limits shall be as specified herein for each occurrence of Property Damage;

h. No "Employee Exclusion" with respect to personal injury coverage; and

i. The Owner shall be named as an additional insured as their interest may appear.

Limits of Liability to be not less than \$500,000 Each Occurrence and Aggregate (where usually applicable) Combined Personal Injury and Property Damage Liability.

8.2.2 Automobile Liability Insurance

Such coverage shall protect the Contractor and the Owner from any claims arising out of the use of any owned, non-owned and hired automobiles.

Limit of Liability to be not less than \$500,000 Each Accident Combined Bodily Injury and Property Damage Liability.

8.2.3 Workers' Compensation and Employers' Liability Insurance

Statutory coverage for place and type of work to be performed.

Employers' Liability Insurance Limits- Not Less Than:

- \$100,000 Each Accident - Bodily Injury by Accident
- \$100,000 Each Employee - Bodily Injury by Disease
- \$500,000 Policy Limit - Bodily Injury by Disease.

8.2.4 Umbrella Liability Insurance

Limit of Liability \$2,000,000 Each Occurrence and Aggregate (where usually applicable), unless otherwise specified.

Required for Contracts which include erection of a structure or facility or an addition to or renovation of an existing structure or facility.

The amount of coverage shall be based upon the 100% projected completed value of the Work and shall be in effect prior to Work commencing and stay in effect until the Contract is completed by the Contractor and accepted by the Owner.

ARTICLE 9 GUARANTY

9.1 The Contractor shall guarantee all materials and work performed for a period of one year from the date(s) of substantial completion

ARTICLE 10 CLAIMS AND DISPUTES

10.1 Any claim, dispute on any matter in question between the Contractor and the OWNER arising under the terms and provisions of this Contract, including without limitation, a claim for breach of contract shall be initially submitted in

writing to the OWNER within thirty days of the event giving rise to the claim, dispute or other matter. The Owner shall in no way be obligated to enter into arbitration proceedings with a Contractor for any purpose whatsoever. The Owner will reserve onto itself the right to determine what form of litigation and its location are appropriate at the time of the dispute arises. Any Claim upon which the Owner elects litigation shall be decided only by non-jury litigation in the Circuit Court of Calvert County, and the Contractor waives jurisdiction or venue in any other court or tribunal.

ARTICLE 11 TAXES

11.1

The Contractor shall pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed.

Section 02910

All markings shall be per street print XD specifications (or approved equal) as noted in the crosswalk detail sheet D-1.

Paving marking system technical specifications.

TrafficPatternsXD™ SPECIFICATION

Imprinted Aggregate Reinforced Preformed Thermoplastic Pavement Marking System

1. **Use:** TrafficPatternsXD™ is a durable imprinted aggregate reinforced preformed thermoplastic pavement marking system (herein “System”) that provides a textured, highly attractive and durable topical treatment to the surface of asphalt pavement. Typically TrafficPatternsXD replicates, in relief, the grout lines common to brick or other types of unit pavers, but may also be used to create other patterns. It is intended for use on asphalt pavements to create traffic calming solutions and decorative crosswalks, medians, intersections and through areas in parking lots. It provides a seamless, aesthetic look without the trip hazards and ongoing maintenance often associated with pavers and stamped concrete.
 - 1.1 TrafficPatternsXD is typically supplied in panels measuring 2 ft. x 2 ft. [$\pm\frac{1}{8}$ in.] (.61m x .61m [± 3 mm])
 - 1.2 TrafficPatternsXD must be able to be applied to asphalt surfaces without preheating the application surface to a specific temperature.
 - 1.3 TrafficPatternsXD must be able to be applied in temperatures down to 45°F (7°C) without any special storage, preheating or treatment of the material before application.
 - 1.4 TrafficPatternsXD is applied to asphalt pavement using proprietary StreetPrint®/StreetHeat® reciprocating infrared heating equipment. A two-part epoxy sealer specified by the manufacturer, Ennis- Flint, must be applied to the substrate prior to preformed thermoplastic application to ensure proper adhesion, and to provide reinforcement for larger volumes of material. Immediately following sealer application, panels of TrafficPatternsXD are positioned properly on the asphalt substrate. The TrafficPatternsXD is then heated to the required melting temperature. Additional aggregate may be applied to the TrafficPatternsXD surface as needed following the melting process, to achieve added friction properties and a uniform surface appearance. As the TrafficPatternsXD is cooling, it is imprinted with a vibratory plate compactor and a template made from 3/8 in. (9.5 mm) flexible wire rope in the required design to create crisp, clean lines which define the pattern. For crosswalks, it is typically demarcated by applying white PreMark® preformed thermoplastic transverse lines made by Ennis-Flint on both sides of the installation.
 - 1.5 TrafficPatternsXD is available in a variety of standard colors and patterns. Color can be used to create patterns within the crosswalk area to reflect the typical white “continental” crosswalk bars for additional visibility and awareness. Within certain limitations, custom patterns and colors are available upon request.
 - 1.6 TrafficPatternsXD is a resilient, aggregate reinforced preformed thermoplastic product which contains a minimum of thirty percent (30%) intermixed anti-skid/anti-slip elements and where the top surface contains anti-skid/anti-slip elements. These anti-skid/anti-slip elements must have a minimum hardness of 6 (Mohs scale).
 - 1.7 TrafficPatternsXD must be resistant to the detrimental effects of motor fuels, antifreeze, lubricants, hydraulic fluids, etc.
2. **MANUFACTURING CONTROL AND ISO CERTIFICATION:** Ennis-Flint is ISO 9001:2008 certified for design, development and manufacturing of preformed thermoplastic, and will provide proof of current certification.
3. **TrafficPatternsXD™ PREFORMED THERMOPLASTIC MATERIAL:** Must be composed of an ester modified rosin impervious to degradation by motor fuels, lubricants, etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements. Pigments and anti-skid/anti-slip elements must be uniformly distributed throughout the TrafficPatternsXD preformed thermoplastic material. TrafficPatternsXD conforms to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state, being non-reflective, and potentially being of a color different from white or yellow.
 - 3.1 Pigments:
 - 3.1.1 White: The TrafficPatternsXD material shall be manufactured with sufficient titanium dioxide pigment to meet FHWA Docket No. FHWA-99-6190 Table 5 and Table 6 as revised and corrected.

TrafficPatternsXD™ SPECIFICATION**Imprinted Aggregate Reinforced Preformed Thermoplastic Pavement Marking System**

- 3.1.2 Other Colors: The pigment system must not contain heavy metals nor any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.
- 3.2 Skid Resistance: The surface of the TrafficPatternsXD preformed thermoplastic material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.
- 3.3 Slip Resistance: The surface of the TrafficPatternsXD preformed thermoplastic material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum static friction of coefficient of 0.6 when tested according to ASTM C 1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.
- 3.4 Thickness: The TrafficPatternsXD material must be supplied at a minimum thickness of 150 mil (3.8mm).
- 3.5 Environmental Resistance: The TrafficPatternsXD material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.
- 3.6 Storage Life: The TrafficPatternsXD material may be stored for 12 months, if stored indoors and protected from the elements.
- 3.7 PreMark® Transverse Lines to Supplement TrafficPatternsXD™ System Application: Supplied as white, retroreflective preformed thermoplastic line stripe material in 90 mil (2.3 mm) or 125 mil (3.2 mm) thicknesses, material is available in 6 in. (.15m), 8 in. (.20m) or 12 in. (.30m) widths. PreMark preformed thermoplastic material may be supplied and applied by the certified applicator in conjunction with the TrafficPatternsXD preformed thermoplastic System, and is available from Ennis-Flint. (Consult the PreMark published application instructions for proper application methods.)

4. SPECIALIZED APPLICATION EQUIPMENT:

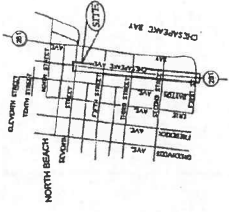
- 4.1 Stamping Templates: A wire rope template is required in the execution of the TrafficPatternsXD System. The template is used for imprinting the defined pattern once the TrafficPatternsXD preformed thermoplastic has been applied. The wire rope diameter for the imprinting template used for the specified pattern is 3/8 in. (9.5mm). The stamping templates are produced and distributed by Ennis-Flint.
- 4.2 StreetPrint®/StreetHeat® Heating Equipment: Ennis-Flint manufactures and distributes StreetPrint®/StreetHeat® brand reciprocating infrared heating equipment designed specifically to elevate the temperature of the TrafficPatternsXD preformed thermoplastic material and asphalt pavement without adversely affecting it. The primary heating unit must employ a bank of propane-fired infrared heaters, mounted on a track device that allows the heater bank to reciprocate back and forth over a designated area, thereby allowing the operator to monitor the temperature of the TrafficPatternsXD preformed thermoplastic at all times during the pavement heating process.
- 4.2.1 A smaller, mobile StreetPrint®/StreetHeat® infrared heater manufactured and distributed by Ennis-Flint is designed specifically to heat areas such as borders and narrow areas that are inaccessible to the primary heaters. This secondary heater also allows the operator to monitor the temperature of the TrafficPatternsXD preformed thermoplastic at all times during the heating process.
- 4.2.2 The Magnum or Flint2000EX hand-held propane heat torch distributed by Ennis-Flint shall be used to heat isolated areas of the preformed thermoplastic.
- 4.3 Sealer: A two-part epoxy sealer specified and distributed by Ennis-Flint must be applied to the substrate prior to the TrafficPatternsXD material application to ensure proper adhesion, and to provide reinforcement for larger volumes of material.
- 4.4 Specialized Sealer Dispensing Gun: Used to dispense the required two-part epoxy sealer onto the substrate. The sealer dispensing guns are distributed by Ennis-Flint.

TrafficPatternsXD™ SPECIFICATION**Imprinted Aggregate Reinforced Preformed Thermoplastic Pavement Marking System**

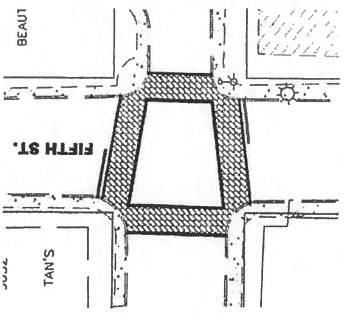
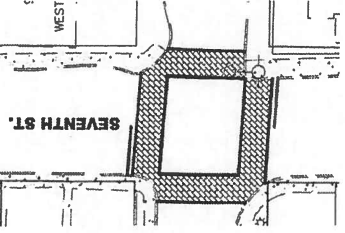
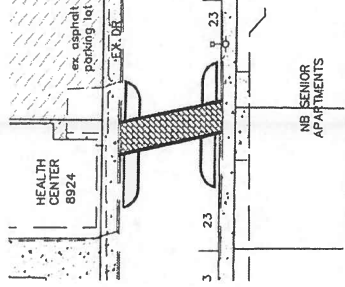
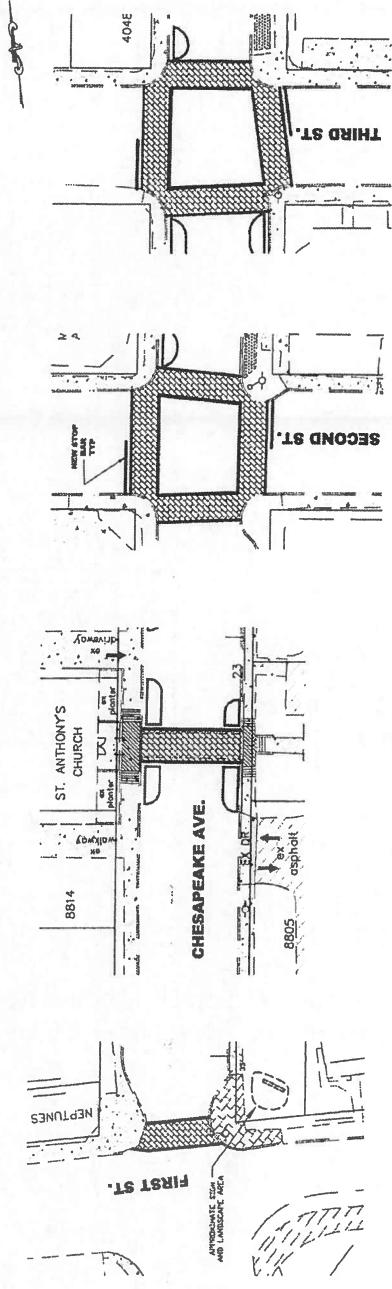
- 4.5 TrafficPatternsXD™ Hand Held Finishing Tool: Enables the applicator to complete the imprinting of the thermoplastic in areas around permanent structures, such as curbs and manholes covers, which may be inaccessible to the stamping template. The hand held finishing tools are distributed by Ennis-Flint.
- 4.6 Aggregate: Supplemental anti-skid/anti-slip elements to be applied to the surface of the molten TrafficPatternsXD thermoplastic as needed, if the factory applied anti-skid/anti-slip elements embed too deeply into the surface of the molten thermoplastic material during the heating process. (Embedded aggregate is exposed upon wear for extended skid resistance.) The aggregate is distributed by Ennis-Flint.
- 4.7 Air Powered Spray Hopper: Used to spray supplemental anti-skid/anti-slip elements (aggregate) on the surface of the molten TrafficPatternsXD preformed thermoplastic in a uniform manner. The air powered spray hoppers are distributed by Ennis-Flint.
- 4.8 Vibratory Plate Compactor (700-900 lb. / 318-408 kg): Shall be used for pressing the 3/8" (9.5mm) wire rope stamping templates into the TrafficPatternsXD thermoplastic to create the specified pattern in both the thermoplastic and asphalt substrate. Ennis-Flint does not supply vibratory plate compactors.

5. APPLICATION (Asphalt Substrate Only):

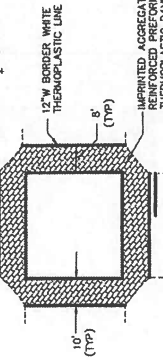
- 5.1 Manufacturer Certified Applicator Requirement: TrafficPatternsXD material shall be supplied and applied only by an Ennis-Flint TrafficScapes™ Certified Applicator. The applicator shall provide proof of current certification before commencing work. The TrafficScapes Certified Applicator shall follow the current published TrafficPatternsXD application procedures.
- 5.2 Substrate Condition: The TrafficPatternsXD material must only be applied to a stable, high quality asphalt pavement substrate over a stable base that is free of defects, as per the Ennis-Flint published TrafficPatternsXD Substrate Guide. The asphalt pavement surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.
- 5.3 Procedure: TrafficPatternsXD is applied to asphalt pavement using StreetPrint®/StreetHeat® reciprocating infrared heating equipment. The material must be able to be applied at ambient and road temperatures down to 45°F (7°C) without any preheating of the pavement to a specific temperature. A two-part epoxy sealer specified by Ennis-Flint must be applied to the substrate prior to the TrafficPatternsXD preformed thermoplastic application. Immediately following sealer application, the panels of aggregate reinforced TrafficPatternsXD preformed thermoplastic are positioned properly on the asphalt substrate with the aggregate side facing up. The TrafficPatternsXD preformed thermoplastic is then heated to the required melting temperature. Additional aggregate may be applied to the TrafficPatternsXD preformed thermoplastic surface as needed following the melting process. As the TrafficPatternsXD material is cooling, it is imprinted with a stamping template made from 3/8 in. (9.5 mm) flexible wire rope in the required design using a vibratory plate compactor. The TrafficPatternsXD preformed thermoplastic material is then allowed to cool thoroughly before being opened to vehicle or pedestrian traffic. (Consult the published TrafficPatternsXD application procedures for complete information.)
- 5.4 TrafficPatternsXD shall not be applied to Portland Cement Concrete.
6. **PACKAGING**: The TrafficPatternsXD preformed thermoplastic material shall be packaged in cardboard cartons with a plastic sheet between each layer of preformed thermoplastic. The cartons in which TrafficPatternsXD is packed shall be non-returnable and shall not exceed 25 in. (.64m) in length and 25 in. (.64m) in width. The cartons shall be labeled for ease of identification. The weight of the individual carton must not exceed seventy (70) pounds (32 kg). A protective film around the carton must be applied in order to protect the TrafficPatternsXD material from rain or premature aging.
7. **TECHNICAL SERVICES**: The successful bidder shall provide technical services as required.



VICINITY MAP
SCALE 1"=1000'



Include in contract
(TYP ALL SREETHERMOPLASTIC 12"
stopbars



IMPRINTED AGGREGATE
THERMOPLASTIC PAVER
MARKING SYSTEM, TRAFFIC
CLOSED TO TRAFFIC
WITH TILE BORDERS OR
APPROVED EQUAL. COLOR TO BE
SELECTED BY THE OWNER



REV #	DATE	DESCRIPTION



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CHESAPEAKE AVE CROSSWALKS
STREETScape PROJECT
CHESAPEAKE AVE
FIRST ST. TO THIRD ST.
TOWN OF NORTH BEACH
CALVERT COUNTY MARYLAND

DATE: APRIL 2017
SHEET NO: 1 of 1