



Town of Denton

*4 North 2nd Street
Denton, Maryland
Invitation for Bids*

Wharves at Choptank Crossing
Contract No. CO4125125
F.A.P No. STP-3(434)E

This project, located in the Town of Denton in Caroline County, Maryland is for the construction of a new visitor's center and the associated site improvements within Crouse Park.

Minority Business Enterprises are encouraged to respond to this Solicitation Notice.

The Town of Denton will only be responsible for the completeness of documents obtained directly from the Town of Denton.

Failure to attach all addenda may cause the bid to be irregular.



Town of Denton

*4 North 2nd Street
Denton, Maryland
Invitation for Bids*

Wharves at Choptank Crossing

Contract No. CO4125125

F.A.P No. STP-3(434)E

This project, located in the Town of Denton in Caroline County, Maryland is for the construction of a new visitor's center and the associated site improvements within Crouse Park.

NOTICE TO BIDDERS

A Pre-Bid meeting for the purpose of answering or obtaining answers to questions of parties interested in constructing the work will be conducted at 10:00 am Friday February 5, 2016 in the Conference Room of the Town of Denton, 4 North 2nd Street, Denton Maryland 21629. Attendance at the Pre-Bid meeting is mandatory.

INVITATION FOR BIDS
Table of Contents

	Latest Date	No. of Sheets
Notice to Contractors – 2011 Maryland Standards and Specifications for E&S Controls.....	01-03-13.....	1
Notice to Contractors –Environmental Stewardship.....	05-07-13.....	1
 CONTRACT PROVISIONS		
Contractor Registration Requirements.....	06-04-13.....	1
Notice To All Holders Of This Contract Document- National Cooperative Highway Research Program (NCHRP) Report 350 Implementation Schedule For Devices Used In The Maintenance Of Traffic.....	03-02-11.....	2
Notice To All Holders Of This Contract Document- Manual on Uniform Traffic Control Devices (MUTCD) Requirements	03-06-12.....	1
Occupying Wetlands.....	10-31-08.....	1
Form FHWA 1273	10-03-12.....	11
Affirmative Action Requirements Utilization of Disadvantaged Business Enterprises for Federal Aid Contracts	03-06-12.....	12
MBE/DBE Compliance Field Meeting.....	10-31-08.....	1
Traffic Control Plan Certification.....	10-31-08.....	1
Prevailing Wage Instructions for the Contractor	12-14-12.....	4
Wage Rate Determination (as required)	07-04-14.....	5
Notice of Actions Required for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246)-.....	10-31-08.....	8
Training Provisions.....	10-31-08.....	4
High Visibility Safety Apparel Policy	10-31-08.....	2
Proposal Form Packet (Federal).....	03-05-14.....	48
 SPECIAL PROVISIONS		
SP-PROJECT DESCRIPTION – Specifications, Employment Agency	10-03-12.....	2
SP-NOTICE TO CONTRACTOR – Request for Information, etc.	03-05-14.....	2
SP-NOTICE TO CONTRACTOR – Early Submissions.....	10-31-08.....	1

INVITATION FOR BIDS
Table of Contents

	Latest Date	No. of Sheets
GENERAL PROVISIONS		
SP-Section 875-Utility Statement		3
TERMS AND CONDITIONS		
SP-TC Section 4-Control of Work		
TC-4.02 Failure to Maintain Project	10-31-08	1
SPI-TC Section 6-Restrictions and Permits		
TC-6.10 Recycled or Rehandled Material	03-03-10	1
SP-TC Section 6-Restrictions and Permits		
TC-6.12 Structure Underclearances and Overhead Clearances	10-03-12	1
SP-TC Section 6-Restrictions and Permits		
TC-6.14 Restrictions for Placing and Using Equipment on Structures or Storing Materials On/Against Structures	11-04-10	1
CATEGORY 100 PRELIMINARY		
SPI-Section 101-Clearing and Grubbing	04-02-13	1
SP-Section 104-Maintenance of Traffic		
104.01 Traffic Control Plan (TCP)	05-03-11	5
CATEGORY 200 GRADING		
SP-Section 203-Borrow Excavation	10-31-08	3
CATEGORY 300 DRAINAGE		
SPI-Section 308-Erosion and Sediment Control.....	06-04-13	6
CATEGORY 500 PAVING		
SPI-Section 504-Hot Mix Asphalt Pavement	06-01-11	5
SP-Section 553-Lead Free Reflective Thermoplastic Pavement Markings	10-31-08	3
SP-Section 559-Permanent Preformed Patterned Reflective Pavement Markings.....	10-31-08	3

INVITATION FOR BIDS
Table of Contents

	Latest Date	No. of Sheets
CATEGORY 800 TRAFFIC		
SPI-Section 806 – Luminaires and Lamps	11-07-12	2
CATEGORY 900 MATERIALS		
SPI-Section 900-Materials		
900.03-Recycled Materials	12-11-13	5
SPI-Section 901-Aggregates		
901.01-Table A, B, C and D	12-11-12	6
SPI-Section 904-Performance Graded Asphalt Binders and Hot Mix Asphalt 904.04.02-Mix Design	12-11-12	1
SPI-Section 905-Pipe	07-02-13	5
SPI-Section 925-Detectable Warning Surfaces	05-04-09	2
SPI-Section 950.12-Luminaires and Lamps	11-07-12	2
P-Section 951-Pavement Marking Materials		
951.07 Permanent Preformed Patterned Reflective Pavement Marking Material	10-31-08	2
SP-Section 951-Pavement Marking Materials		
951.02 Lead Free Reflective Thermoplastic Pavement Markings	10-31-08	4
APPENDIX A		
Geotechnical Report.....	07-31-06	38
APPENDIX B		
Environmental Permits.....		45

NOTICE TO CONTRACTORS

Most SHA projects advertised for construction after July 1, 2012 were designed to follow the “2011 Maryland Standards and Specifications for Soil Erosion and Sediment Control”. This project will be built using the 2011 version of these Standards and Specifications. These Standards and Specifications contain significant revisions to materials and methods compared to earlier versions. Perspective bidders are encouraged to consider the impacts of these changes when preparing their bids. These Standards and Specifications can be found on the internet at: <http://www.roads.maryland.gov/Index.aspx?PageId=689&d=6> .

NOTICE TO CONTRACTORS

Environmental Stewardship

The Maryland State Highway Administration is committed to the development and maintenance of the Administration's highway system in an environmentally responsible manner. Therefore, Contractors are encouraged to consider the use of Administration-approved recycled and reclaimed materials in construction projects where practicable, and in accordance with the Plans and Specifications.

The Contractor is also encouraged to reuse, salvage, or recycle all generated waste materials to the extent possible. Materials that are easily recognizable, maintain their physical properties, meet the required material properties for recycling, are easily separated and transported, and have value as commodities are candidates for recycling. These types of materials generally include metals (steel, iron, copper, aluminum, bronze, etc.), plastics (cones, barrels, barricades, crash cushion plastic barrels, conduit, containers, etc.), aluminum poles and signs, electronic and electrical components, signals and signal components, topsoil, formwork, temporary falsework, brick, masonry, stone, wood, paper, and timber and yard waste from clearing and grubbing operations.



CONTRACTOR REGISTRATION REQUIREMENTS

On all Federal-Aid funded contracts, the Administration is requiring that Contractors have an active Dun and Bradstreet Data Universal Numbering System (DUNS) and be registered in the Central Contract Registration (CCR) database prior to Award of Contract.

The Contractor DUNS number is a unique nine-digit number issued by Dun & Bradstreet, followed by the optional 4 digit DUNS Plus number (reported as “999999999.9999”). A DUNS number can be obtained on-line at <http://fedgov.dnb.com/webform>.

The Central Contractor Registration (CCR) is no longer the primary registrant database for the U.S. Federal Government.

The System for Award Management (SAM) is the Official U.S. Government system that consolidated the capabilities of CCR/FedReg, ORCA, and EPLS. There is NO fee to register for this site. Entities may register at no cost directly from this page. User guides and webinars are available under the Help tab. Contractor’s can now register on-line at <https://www.sam.gov>.



NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP)
REPORT 350 AND THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
IMPLEMENTATION SCHEDULE FOR DEVICES USED IN THE MAINTENANCE OF
TRAFFIC**

Except as otherwise specified in this Section, all items for the maintenance of traffic, including those listed under the following categories, shall be crashworthy in conformance with Level 3 or other Level as specified by the Engineer in conformance with the safety crash testing and performance criteria published in the National Cooperative Highway Research Program (NCHRP) Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features" or the Manual for Assessing Safety Hardware (MASH). When conformance with NCHRP Report 350 or MASH is required, the Contractor shall provide the Engineer with the manufacturers' certifications that the devices comply with the specified criteria.

Unless specifically waived by an attachment to these Contract Provisions, devices must be approved by the Office of Traffic and Safety.

Category 1 Devices

These devices are cones, tubular markers, flexible delineator posts, and drums, all without any accessories or attachments, which are used for channelization and delineation.

Category 2 Devices

These devices are Type I, II, and III barricades; portable sign supports with signs; intrusion alarms; and drums, vertical panels, and cones, all with accessories or attachments.

Category 3 Devices

- (a) Truck Mounted Attenuators (TMAs) and Trailer Truck Mounted Attenuators (TTMAs).
- (b) Temporary Barrier.
 - (1) Concrete Barrier.
 - (2) Traffic Barrier W Beam and Water Filled Barrier.
 - (3) Steel/Aluminum Barrier.
- (c) Temporary End Treatments.

Category 4 Devices

These devices are area lighting supports, arrow panels, and portable variable message signs that are usually portable or trailer-mounted.

CONTRACT PROVISIONS
(NCHRP) REPORT 350 AND MASH IMPLEMENTATION SCHEDULE

CONTRACT NO. CO4125125
 2 of 2

WORK ZONE DEVICES	IMPLEMENTATION SCHEDULE TO CONFORM TO NCHRP REPORT 350 OR MASH CRITERIA
CATEGORY 1 Cones, tubular markers, flexible delineator posts, and drums (all without any accessories or attachments)	All devices shall conform to NCHRP Report 350 or MASH criteria.
CATEGORY 2 Type I, II, and III barricades; portable signs supports with signs; intrusion alarms; and drums, vertical panels, and cones (all with accessories or attachments)	All devices shall conform to NCHRP Report 350 or MASH criteria.
CATEGORY 3 (a) Truck Mounted Attenuators (TMAs); Trailer Truck Mounted Attenuators (TTMAs) (b) Temporary Barriers (1) Concrete Barrier (2) Traffic Barrier W Beam and Water Filled Barrier (3) Steel/Aluminum Barrier (c) Temporary End Treatments	All devices shall conform to NCHRP Report 350 or MASH criteria.
CATEGORY 4 Portable trailer mounted devices including area lighting supports, arrow panels, and changeable message signs	The Contractor may use devices that do not conform to NCHRP Report 350 or MASH criteria, until compliance dates are established. Use of these devices shall comply with the provisions of Part 6 of the MUTCD.

NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT

**MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL
DEVICES (MdMUTCD) REQUIREMENTS**

The 2011 Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) is the legal State standard for traffic control devices. All traffic control devices (temporary or permanent) utilized on Administration projects shall be in conformance with the requirements provided in the 2011 Edition of the Administration's MdMUTCD for Streets and Highways.



CONTRACT PROVISIONS
OCCUPYING WETLANDS

CONTRACT NO. CO4125125
1 of 1

OCCUPYING WETLANDS

The Contractor is hereby alerted to the importance of preserving wetland areas. The Administration, in conjunction with the various environmental agencies, has developed these Contract Documents so as to minimize or eliminate disturbance and damage to existing wetland areas. In order to accomplish this, the following must be rigidly adhered to:

- (a) Prior to performing any work on the project, the areas of wetland will be identified and marked as directed by the Administration. All personnel of the Contractor or sub-contractors shall be alerted to these designated areas.
- (b) The Contractor or sub-contractors shall not impact any wetland or waterway, whether it be permanently or temporarily unless otherwise stipulated in the permit application and approved as an authorized action by the appropriate regulatory agency. No fill shall be placed in these areas without a permit.
- (c) If a Contractor or sub-contractor has to impact a wetland or waterway that is not covered by an existing wetland permit, they shall immediately notify the Engineer. The Engineer will notify the Environmental Programs Division to determine the extent of any permit modification. At that time the Environmental Programs Division will request a permit modification or submit a permit application.
- (d) If the Contractor impacts any wetland or waterway for which they do not have a wetland permit, they shall be responsible for restoring the wetland areas and possibly mitigating the wetland impacts to the full satisfaction of the environmental agencies, which could include monetary compensation.
- (e) The cost of restoration and mitigation of the impacted areas shall be at no additional cost to the Administration.

The importance of not abusing the wetland areas cannot be overemphasized. Abuse of wetland areas could jeopardize the operation of the total Contract and could be cause for a shut-down. If a shut-down occurs because of the Contractor's failure to secure the required permits (i.e. the Contractor's method of work includes impacts not approved by previously acquired permits), the Contractor's negligence or operations, all costs and damages to the Contractor and to the State will be at no additional cost to the Administration. Noncompliance with these requirements will not be considered for an extension of Contract time.

**REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS**

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's

immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the

provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of

employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these

special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work

classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for

determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that

the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed,

as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity

requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.



**AFFIRMATIVE ACTION REQUIREMENTS
UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES
FOR FEDERAL-AID CONTRACTS**

CONTRACT GOALS

FOR THE PURPOSE OF THIS CONTRACT, A GOAL OF ELEVEN PERCENT (11%) HAS BEEN ESTABLISHED FOR SOCIALLY AND ECONOMICALLY DISADVANTAGED BUSINESSES THAT ARE OWNED AND CONTROLLED BY – THOSE INDIVIDUALS WHO ARE BLACK AMERICANS, HISPANIC AMERICANS, ASIAN-PACIFIC AMERICANS, SUBCONTINENT ASIAN AMERICANS, NATIVE AMERICANS, OR WOMEN PURSUANT TO THE MARYLAND DEPARTMENT OF TRANSPORTATION (MDOT) MINORITY BUSINESS ENTERPRISE PROGRAM:

It is the policy of the Maryland Department of Transportation that disadvantaged business enterprises as defined in 49 CFR Part 26 and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) shall have an equal opportunity to participate in the performance of the contracts financed in whole or in part with Federal funds under these agreements. Consequently, the disadvantaged business enterprise requirements of 49 CFR Part 26 and SAFETEA-LU apply to this agreement.

The bidder agrees to ensure that disadvantaged business enterprises as defined in 49 CFR Part 26 and SAFETEA-LU have an equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds provided under this agreement. In this regard, all bidders shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 and SAFETEA-LU to ensure that disadvantaged business enterprises have an equal opportunity to compete for and perform on Federally funded contracts. The Maryland Department of Transportation and their bidders shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of this Contract.

A. GENERAL

For the purpose of these requirements, the following terms as defined below shall apply:

Administration Representative – A DBE/MBE Officer or employee of an Administration who enforces the laws and regulations pertaining to disadvantaged and minority business enterprise and contract compliance.

Affirmative Actions – Specific steps taken to eliminate discrimination and its effects, to ensure nondiscriminatory results and practices in the future, and to involve disadvantaged and minority business enterprises fully in contracts and programs.

Business Enterprises – 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.



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
2 of 12

Certified Business – A business which by order of the Chair/MBE Advisory Council or his/hers designee, has been certified as a bona fide DBE/MBE. MDOT certification does not equate to a pre-qualification status.

DBE – Disadvantaged Business Enterprise – Reference 49 CFR, Part 26, Subpart A) a small business concern: (1) which is at least 51 percent owned by one or more socially and economically disadvantaged individuals. Where stock ownership is involved, the disadvantaged owner(s) shall own at least 51 percent of each class of voting stock and at least 51 percent of the aggregate of all classes of stock that have been issued (also applies to publicly owned businesses); and (2) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who have ownership. In this specification the terms MBE and DBE have the same meaning.

DBE/MBE Directory – A compilation of businesses certified by MDOT as disadvantaged, minority, or socially and economically disadvantaged businesses. The directory will be published annually with quarterly supplements. It will also be provided in automated format and on the Internet to be updated as changes are made.

DBE/MBE Participation Packet – The documents submitted by the bidder or proposer pursuant to the appropriate special bid provisions. The DBE/MBE Participation Packet consists of the Certified DBE Utilization and Fair Solicitation Affidavit and the DBE Participation Schedule, both of which must be submitted with your bid or initial price proposal. The DBE Participation Packet also includes the following documents, which shall be submitted after bids or proposals are opened: Outreach Efforts Compliance Statement (MDOT-OP-018-2), DBE Subcontractor Project Participation Affidavit (MDOT-OP-019-2), MDOT Joint Venture Disclosure Affidavit (D-EEO-006), and Minority Contractor Unavailability Certificate (OOC46).

DBE/MBE Program – A program developed by MDOT to implement the requirements of Title 14, Subtitle 3 of the State Finance and Procurement Article, Annotated Code of Maryland; Title 10, Subtitle 3 of the State Finance and Procurement Article of the Annotated Code of Maryland for Leases of State-Owned Property; and 49 CFR, Part 26, Subparts A and C for all Federal Department of Transportation Financial Assistance Programs.

Director, Office of Equal Opportunity – The individual designated for the Administration's overall MBE compliance.

Joint Venture – An association of a DBE/MBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills, and knowledge, and in which the DBE/MBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
3 of 12

Small Business Administration (SBA) 8(a) Certification – The SBA 8(a) Certification Program is a Federal Program which establishes firms as disadvantaged and eligible for participation in the Federal SBA Program.

Socially and Economically Disadvantaged Individual Pursuant to 49 CFR, Part 26 – Those individuals who are citizens of the United States (or lawfully admitted permanent residents). For convenience, these individuals and groups are referred to as “minorities” in this document and who are:

1. Found by the MDOT to be socially and economically disadvantaged on a case-by-case basis;
2. Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged.
 - a. “Black Americans,” which includes persons having origins in any of the Black racial groups of Africa;
 - b. “Hispanic Americans,” which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;
 - c. “Native Americans,” which includes persons who are American Indian, Eskimos, Aleuts, or Native Hawaiians;
 - d. “Asian-Pacific Americans,” which included persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Juvalu, Nauru, Federated States of Micronesia, or Hong Kong;
 - e. “Subcontinent Asian American,” which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;
 - f. Women;
3. Only those persons whose personal net worth does not exceed \$750,000 may be found to be economically disadvantaged.

B. DBE/MBE and Good Faith Effort Requirements

1. This contract includes a DBE participation goal for subcontracting and/or procurement of materials and/or services. Bidders (or offerors) must make a good faith effort to meet the DBE participation goal **before bids or proposals are due**, including outreach efforts. A



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
4 of 12

bid or initial proposal must include both a completed and executed Certified DBE Utilization and Fair Solicitation Affidavit and DBE Participation Schedule. The failure of a bidder to complete and submit these documents shall result in a determination that the bid is not responsive. The failure of an offeror to complete and submit these documents shall result in a determination that the proposal is not susceptible of being selected for award.

2. In making a good faith effort to achieve the DBE goal, prior to completing the Certified DBE Utilization and Fair Solicitation Affidavit and the DBE Participation Schedule and prior to submitting a bid or initial proposal the bidders (or offerors) including those bidders or offerors that are certified DBEs must:
 - a. Identify specific work categories within the scope of the procurement appropriate for subcontracting and/or procurement of materials and/or services;
 - b. **Solicit DBEs in writing at least 10 days before bids or initial proposals are due**, describing the identified work categories and providing instructions on how to bid on the subcontracts and/or procurement of materials and/or services;



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
5 of 12

- c. Attempt to make personal contact with the DBEs solicited and to document these attempts;
 - d. Assist DBEs to fulfill, or to seek waiver of, bonding requirements; and
 - e. Attend prebid or other meetings the procurement agency schedules to publicize contracting opportunities to DBEs.
3. All firms bidding on a Federal-Aid Contract shall submit the name and address of all subcontractors, service providers and suppliers that submitted quotes on the Contract. All subcontractors, service providers and suppliers shall complete and submit the form entitled Contractor Information, to the Administration.
4. The bidder shall seek commitments from disadvantaged business enterprises by subcontracting and/or procurement of materials and/or services, the combined value of which equals or exceeds the appropriate percent (goal) of the total value of the prime contract. A bidder may count toward its DBE goals expenditures for materials and supplies obtained from DBE regular dealers and/or manufacturers provided that the DBEs assume the actual and contractual responsibility for the provision of the materials and supplies. The bidder may count its entire expenditure to a DBE manufacturer (i.e., a supplier that produces goods from raw materials or substantially alters them before resale). The bidder may count sixty (60) percent of its expenditures to a DBE regular dealer that is not a manufacturer, provided that the DBE supplier performs a commercially useful function in the supply process. The apparent low bidder shall submit to the Administration, within ten (10) business days after notification that it is the apparent low bidder, an acceptable Affirmative Action Plan for the utilization of Disadvantaged Business Enterprises in this Contract. The Contract will not be awarded without the Bidder's AAP being approved by the Administration.

The Affirmative Action Plan shall include as a minimum:

- a. The name of an employee designated as the bidder's liaison officer for minority affairs.
- b. A complete DBE Subcontractor Project Participation Affidavit (MDOT-OP-019-2), using contractors whose names appear in the DBE/MBE directory or who are otherwise certified by MDOT as being a disadvantaged business enterprise. Except as permitted by law and approved by the Administration, this affidavit shall include all DBE firms identified on the DBE Participation Schedule with a percentage of participation that meets or exceeds the percentage of participation indicated in the bid or initial proposal.
- c. A completed Outreach Efforts Compliance Statement (MDOT-OP 018-2).



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
6 of 12

5. When a bidder intends to attain the appropriate goal for disadvantaged business enterprise participation by use of a joint venture, the bidder shall submit a Joint Venture Disclosure Affidavit (Form D-EEO-006-A) showing the extent of disadvantaged business participation. If a bidder intends to use a joint venture as a subcontractor to meet its goal, the affidavit shall be submitted through the bidder by the proposed subcontractor and be signed by all parties. A DBE, even in a joint venture arrangement shall be certified as a DBE by MDOT prior to being included in the Affirmative Action Plan.
6. Where the proposed DBE participation does not meet the DBE contract goals, sufficient evidence to demonstrate that the bidder has taken all necessary and reasonable steps to make a good faith effort to meet these goals shall be required.

7. Determination of Bid Responsiveness for Federal-Aid Contracts

If the bidder is unable to secure from DBEs by subcontracting and/or by procurement of materials and/or services, commitments which at least equal the appropriate percent (goal) of the values of the prime Contract at the time of bid, he shall request, in writing, a waiver of the unmet portion of the goal. This request must be initiated by checking the appropriate box on the Certified DBE Utilization and Fair Solicitation Affidavit submitted with the bid or initial proposal.

The waiver may be granted by the Administrator. To obtain approval of a waiver, the bidder shall submit the following information:

- a. A detailed statement of efforts made prior to bid to contact and negotiate with DBEs including: (i) the dates, names, addresses, and telephone numbers of DBEs who were contacted; (ii) a description of the information provided to DBEs requesting the plans, specifications, and anticipated time schedule for portions of the work to be performed and (iii) a detailed statement of the reasons why additional prospective agreements with DBEs were not reached;
 - b. A detailed statement of the efforts made to select portions of the work proposed to be performed by DBEs in order to increase the likelihood of achieving the stated goals;
 - c. For each DBE that the Contractor considers not qualified, but from which a bid has been received, a detailed statement of the reasons for the bidder's conclusion; and
 - d. For each DBE contacted but unavailable, (i) a Minority Contractor Unavailability Certificate (Form OOC46) signed by the disadvantaged business enterprise, or (ii) a statement from the bidder shall be submitted that states that the DBE refused to sign the Certificate.
- 8. Guidance concerning good faith efforts.** The following is a list of the types of actions and factors that will be used to determine the bidder's or offeror's good faith efforts to



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

- (1) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
- (2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the bidder or offeror might otherwise prefer to perform these work items with its own forces.
- (3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (4) (a) Negotiating in good faith with interested DBEs. It is the bidder's or offeror's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation.

(b) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidders and offerors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal.



- (6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- (7) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- (9) In determining whether a bidder or offeror has made good faith efforts, you may take into account the performance of other bidders or offerors in meeting the contract goal. For example, when the apparent successful bidder or offeror fails to meet the contract goal, but others meet it, the Administration may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder or offeror could have met the goal. If the apparent successful bidder or offeror fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders or offerors, the Administration may view this, in conjunction with other factors, as evidence of the apparent successful bidder or offeror having made good faith efforts.

9. Bidder Use of DBE Special Services

The bidder shall consider, whenever possible, utilizing the services of minority-owned banks. Most minority banks are full-service corporations that can provide an array of financial services such as Treasury and Tax Loan fund accounts, time and demand deposit accounts, payroll services, and if needed, organization investment counseling.

10. Bidder Records

The bidder shall maintain records showing actions which have been taken to comply with procedures set forth herein.

11. Bidder Cooperation

The bidder shall cooperate with the Administration Representative in any reviews of the Contractor's procedures and practices with respect to DBEs which the Administration Representative may from time to time conduct.

12. Bidder DBE Modifications



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
9 of 12

During the life of the Contract, all plans to modify the approved DBE participation program will require the approval of the Administrator or his authorized representative. This shall include any changes to the items of work to be sublet or materials and services to be obtained which differ for those in the original DBE participation program. Any such request for revisions shall be directed to the appropriate District Engineer for their disposition.

C. RECORDS AND REPORTS

1. The Contractor shall keep such records as are necessary to determine compliance with its Minority Business Enterprise utilization obligations. The records kept by the Contractor shall be designed to indicate:
 - a. The name of disadvantaged and non-disadvantaged subcontractors and suppliers, the type of work materials or services being performed on or incorporated in this project, and the monetary value of such work materials or services.
 - b. Documentation of all correspondence, contacts, telephone calls, etc., to obtain the services of disadvantaged business enterprises on this project.
 - c. The progress and efforts made in seeking out disadvantaged contractor organizations and individual disadvantaged contractors for work on this project.
2. Information required to be submitted for Federally Assisted contracts in accordance with 49 CFR Part 26:
 - a. All bidders (not only the apparent successful bidder) shall provide the following information:
 - (1) The age of the bidding firm; and
 - (2) The annual gross receipts of the bidding firm.
 - b. All bidders (not only the apparent successful bidder) shall provide the following information for each firm quoting or considered as subcontractors:
 - (1) The name of firm; and
 - (2) The address of firm.
 - c. The Administration will contact each of the firms quoting or considered as subcontractors to obtain:
 - (1) The age of the firm; and
 - (2) The annual gross receipts of the firm



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
10 of 12

If this information already has been gathered by the Administration on a firm and it is current, it will not be requested.

3. The Contractor shall submit reports on a monthly basis of those contracts and other business transactions executed with disadvantaged business enterprises with respect to the records referred to in Subparagraph 1.a above, in such form, manner, and content as prescribed by the Administration. The reports shall be due monthly on the 15th calendar day of each month. If the Contractor cannot submit their report on time, they shall notify the Administration's Representative and request additional time to submit the report. Failure of the Contractor to report in a timely manner may result in a finding of noncompliance. Additional reports may be required by the Administration upon written request.
4. To ensure compliance with the certified DBE contract participation goals, the Contractor shall:
 - a. Submit monthly, a report listing unpaid invoices, over 30 days, from all certified DBE subcontractors and the reason payment has not been made;
 - b. Include in its agreement with certified DBE subcontractors a requirement that the DBE subcontractors are to submit monthly to the Administration, a report identifying the prime Contractor and listing the following:
 1. Payment received from the Contractor in the preceding 30 days; and
 2. Invoices for which the subcontractor has not been paid.
5. All such records shall be retained for a period of three years following acceptance of final payment and shall be available for inspection by the U.S. Department of Transportation, the Maryland Department of Transportation, and the Administration.

D. ADMINISTRATIVE PROCEDURES FOR ENFORCEMENT

1. Whenever the Administration believes the prime Contractor or any subcontractor may not be operating in compliance with the terms of these provisions, the Administration Representative will conduct an investigation. If the Administration Representative finds the prime Contractor or any subcontractor not in compliance with these provisions, he will make a report of non-compliance and notify such Contractor in writing of the steps that will, in the judgment of the Administration, bring the Contractor into compliance. If the Contractor fails or refuses to comply fully with such steps, the Administration Representative will make a final report of noncompliance to the Administrator, who may direct the imposition of one or more of the sanctions listed below:
 - a. Suspension of work on a project, pending correction;



CONTRACT PROVISIONS
DBE FOR FEDERAL-AID CONTRACTS

CONTRACT NO. CO4125125
11 of 12

- b. Withholding payment or a percentage thereof, pending correction;
- c. Referral of DBE/MBE to MDOT Office of MBE for review for decertification or minority business fraud investigation;
- d. Referral to MDOT Office of MBE for review/referral to the Attorney General's Office for review for initiation of debarment;
- e. Referral to the Attorney General's Office for review for debarment or for criminal prosecution through the MDOT Office of General Counsel; or
- f. Any other action as appropriate.

The Administrator will determine which sanction(s) should be imposed in order to promote the purpose of the MDOT DBE/MBE Program.

- 2. If the documents used to determine the status of a DBE contain false, misleading, or misrepresenting information, the matter may be referred to the MDOT Office of MBE for appropriate action.
- 3. Loss of DBE Certification
 - a. When a prime Contractor has made a commitment to use a DBE who has lost its certification but the subcontract has not been executed prior to the notice of loss of certification, the prime Contractor is required to obtain an eligible, certified DBE for the contract or demonstrate to MDOT that it has made a good faith effort to do so.
 - b. When a prime Contractor has executed a contract with a DBE subcontractor before the notice of loss of certification, the prime Contractor may continue to use the firm on the contract and may continue to receive credit towards its DBE goal, i.e., contract goal, for the work of that subcontractor.
 - c. The work carried out by a DBE Prime Contractor would be counted by MDOT up to the loss of certification. The work performed after the loss of certification would not be considered DBE participation.
 - d. When a DBE subcontractor has lost its certification, MDOT may not continue to count the DBE participation which takes place after the loss of certification as DBE work when counting participation towards the overall goal of the modal administration or the Department.
 - e. If a DBEs loss of certification is the result of exceeding the size standards while performing on a contract, the DBE participation may be counted for both the contract goal and the overall goal.



E. SUBCONTRACTING.

Subcontracting by the Prime Contractor. Form B Request for Approval of Subcontractor shall be used by the Prime Contractor to request approval of a Subcontractor and also to ensure that a formal Subcontract has been or will be written and kept on file by the Prime Contractor. Completion and submittal of the form by the Prime Contractor acknowledges that the Administration's Contracting Officer may require the submission of the written Subcontract for review by the Administration and/or FHWA.

Lower Tier Subcontracting by an Approved Subcontractor. Form B Subcontractor's Request for Approval of Lower Tier Subcontractor shall be used by an Approved Subcontractor to request approval of a Lower Tier Subcontractor and also to ensure that a formal Subcontract has been or will be written and kept on file by the Subcontractor. Completion and submittal of the form by the Subcontractor acknowledges that the Administration's Contracting Officer may require the submission of the written Subcontract for review by the Administration and/or FHWA.

Form Acquisitions. Maryland State Highway Administration Form B may be acquired through the Administration's Contracts Award Team or District Office. All questions should be directed to the Office of Construction, Contracts Award Team.

It is the Administration's intention to randomly select during each calendar quarter a representative sample of written Subcontracts for review. This review will be conducted by the Office of Construction's Contracts Award Team.



MBE/DBE COMPLIANCE FIELD MEETING

A MBE/DBE compliance Field Meeting will be conducted to review the responsibilities of the Administration and the Contractor's personnel relative to MBE/DBE Compliance and documentation. The meeting will be held within two weeks after starting work on the project.

The Construction Project Engineer, who will notify the following of the date, time and location, will arrange the meeting. At least one week advanced notice will be required.

(a) Administrative Representatives.

- (1) Director, Office of Equal Opportunity or Designee
- (2) District Equal Opportunity Officer
- (3) Regional Constructional Engineer
- (4) Construction Project Engineer
- (5) Construction Inspection Division Inspector

(b) Contract Representatives.

- (1) Superintendent - Prime Contractor
- (2) Equal Opportunity Officer - Prime Contractor
- (3) Owner/Superintendent/Foreman MBE/ DBE - Subcontractor

The Construction Project Engineer and Equal Opportunity Representative will jointly conduct the meeting. The Contractor shall notify the appropriate subcontractors and ensure their attendance.



CONTRACT PROVISIONS
TRAFFIC CONTROL PLAN CERTIFICATION

CONTRACT NO. CO4125125
FAP NO. STP-3(434)E
1 of 1

TRAFFIC CONTROL PLAN CERTIFICATION

PRIOR TO THE COMMENCEMENT OF WORK ON THIS PROJECT, THE SUCCESSFUL BIDDER WILL BE REQUIRED TO COMPLETE A TRAFFIC CONTROL PLAN CERTIFICATION, CONTAINING THE INFORMATION SHOWN BELOW. THE CERTIFICATION FORM WILL BE PROVIDED TO THE SUCCESSFUL BIDDER UPON AWARD OF THE CONTRACT.

The Administration's Traffic Control Plan (TCP) has been reviewed and the following course of action shall be followed:

Option 1 _____
The TCP is accepted and shall be used on this project.

Option 2 _____
The TCP is accepted; however, revisions and/or additions shall be submitted for approval in conformance with the Administration's Specifications 104.01.

Option 3 _____
The TCP is not accepted and revision shall be submitted for approval in accordance with the Administration's Specifications 104.01.

It is understood that the effective implementation of the approved TCP is the responsibility of the Contractor. Minor modifications may be made by the Traffic Manager if field conditions warrant and prior concurrence is obtained from the Engineer. Significant changes to the TCP will be submitted to the Engineer in writing, for approval, in conformance with the Administration's Specifications 104.01.

(DATE)

(SIGNATURE)

(PRINT SIGNATURE)

(TITLE)



**PREVAILING WAGE
INSTRUCTIONS FOR THE CONTRACTOR**

PAYROLLS.

Non-Federally Funded Contracts. The Division of Labor and Industry, Prevailing Wage Unit is requiring that all certified payroll records be submitted electronically. For instructions on how to register and submit go online to www.dllr.state.md.us/prevwage and follow the instructions for registering. The regulation addressing this change can be found at COMAR 21.11.11.02. For Non-Federally funded projects, which include prevailing wage rates, the prime Contractor and each subcontractor, shall submit the certified payroll electronically and provide one hard copy to the Project Engineer. All wages shall be paid in conformance with the State Finance and Procurement Article, Section 17-201-17-226 of the Annotated Code of Maryland and the Fair Labor Standards Amendments of 1974 (P.L. 93259). If the award amount of a Non-Federally funded job is less than \$500,000, the project will be exempt from prevailing wage requirements.

A review has been made of the wage conditions in the locality and, based on the information available, the wage rates and fringe payments listed are determined by the Commissioner of the Department of Labor and Industry to be prevailing for the Contract for the described classes of labor in conformance with the law. It shall be the responsibility of the Contractor to fully comply with the law and to contact the Office of the Commissioner of Labor and Industry for interpretation of the provisions of the law.

Federally Funded Contracts. For Federally funded projects, the prime Contractor and each subcontractor shall submit one copy of the certified payroll to the Project Engineer.

General Requirements for Federally and Non-Federally Funded Contracts. All payrolls are subject to the following requirements:

- (a) All payrolls shall be numbered, beginning at No. 1, and consecutively numbered through the end of the Contract.
- (b) Contract and FAP numbers shall be shown on all payrolls (as applicable).
- (c) All payroll submissions shall include:
 - (1) Federally Funded – employees’ full name, classification, and Individual Identifying Number (IIN) e.g. (last four digits of social security number). Refer to FHWA 1273 (IV),(3),(b)1) for further requirements related to weekly payrolls.
 - (2) Non-Federally Funded – employees’ full name, classification, address and social security number.



CONTRACT PROVISIONS
PREVAILING WAGE INSTRUCTIONS

CONTRACT NO. CO4125125
2 of 4

- (d) All payrolls shall show the employee's basic hourly wage rate, overtime rate (if applicable), and the number of hours worked (tabulated both daily and weekly).
- (e) When fringe benefits are required, indicate separately the amount of employer contributions to fringe benefit funds and/or programs. The fringe benefits shall be individually identified, but may be tabulated on a separate sheet. When required fringe benefits are paid in cash, add the required fringe benefit amount to the basic hourly rate to obtain the total prevailing wage rate for the employee.
- (f) The employee's net pay and the itemized deductions shall be included in all payrolls.
- (g) A Contractor may make deductions that are required by law or required by a collective bargaining agreement (between the Contractor and a bona fide labor organization). Deductions are also permitted if they are identified in a written agreement between the employee and employer that was made at the beginning of employment, provided that the Contractor presents the agreement to the Administration before the employee begins working on the Contract. Each payroll shall also include the U.S. Department of Labor and Hour Public Contracts Division Statement of Compliance Form WH-347 (or its equivalent), signed by an appropriate official of the Contractor/subcontractor. The Contractor's name, address, and telephone number shall also be shown.
- (h) On Non-Federally funded projects, all apprentices shall be registered with the Maryland Apprenticeship and Training Council.
- (i) Contractors employing a classification of worker for which a wage rate was not included on the original wage decision, shall submit to either the Wage and Hour Team (Federally Funded) or Department of Labor and Licensing (DLLR), (Non-Federally Funded), a request for an additional classification and rate prior to the employee's employment at the project.
- (j) Payrolls for Non-Federally Funded projects shall be submitted within 14 calendar days after the end of each payroll period.
- (k) Payrolls for Federally Funded projects shall be submitted within 7 calendar days after the end of each payroll period.
- (l) Contractors and Subcontractors are required to maintain complete social security numbers and home addresses for employees. Government agencies are entitled to request or review all relevant payroll information, including social security numbers and addresses of employees. Contractors and Subcontractors are required to provide such information upon request.



CONTRACT PROVISIONS
PREVAILING WAGE INSTRUCTIONS

CONTRACT NO. CO4125125
3 of 4

OVERTIME.

Non-Federally Funded Contracts. Overtime rates shall be paid by the prime Contractors and subcontractors under their Contracts and agreements with their employees, which in no event shall be less than time and a half the prevailing hourly rate of wages for all hours worked in excess of ten hours in any one calendar day or forty hours in any one calendar week and work performed on Sundays and legal holidays.

Fringe benefits shall be paid for all hours worked, including the overtime hours. However, the fringe benefit amounts may be excluded from the half time premium due as overtime compensation.

Federally Funded Contracts. Overtime rates shall be paid as specified in Form FHWA 1273. Fringe benefits shall be paid for all hours worked, including the overtime hours. However, the fringe benefit amounts may be excluded from the half time premium due as overtime compensation.

PENALTIES.

Non-Federally Funded Contracts. When the Contractor is delinquent in submitting payroll records, processing of partial payment estimates will be held in abeyance, pending receipt of the records. The Contractor shall be liable to the Administration for liquidated damages in the amount of \$10.00 for each calendar day the records are late.

The Contractor shall be liable to the Administration for liquidated damages in the amount of \$20.00 for each day that an employee is paid less than the prevailing wage.

Federally Funded Contracts. When the Contractor is delinquent in submitting payroll records, processing of partial payment estimates will be held in abeyance pending receipt of the records.

ADDITIONAL CLASSIFICATIONS.

Federally Funded Contracts. If the wage determination lacks a necessary classification the Prime Contractor is responsible to submit the request for the additional classification, with a proposed rate, to the State Highway Administration's Wage and Hour Team. The request is to include a copy of the projects wage determination.

Non-Federally Funded Contracts. If the wage determination lacks a necessary classification the Prime Contractor is responsible to submit the request for the additional classification, with a proposed rate, to the Department of Labor and Licensing (DLLR).



Maryland Department of Transportation
State Highway Administration

CONTRACT PROVISIONS
PREVAILING WAGE INSTRUCTIONS

CONTRACT NO. CO4125125
4 of 4

INQUIRIES.

Request for information or questions shall be addressed to:

Maryland State Highway Administration
Office of Construction
Wage and Hour Team
7450 Traffic Drive, Building #4
Hanover, MD 21076
or
Email: wageandhourteam@sha.state.md.us

>

General Decision Number: MD150047 12/25/2015 MD47

Superseded General Decision Number: MD20140047

State: Maryland

Construction Type: Building

County: Cecil County in Maryland.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/09/2015
2	04/03/2015
3	05/08/2015
4	06/05/2015
5	07/03/2015
6	07/17/2015
7	07/31/2015
8	08/14/2015
9	11/27/2015
10	12/11/2015
11	12/25/2015

* ASBE0024-007 10/01/2015

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 34.33	13.92

Includes the application of all insulating materials, protective coverings, coatings and finishes to all types of mechanical systems

 CARP0101-013 07/01/2011

	Rates	Fringes
CARPENTER (Drywall Hanging,		

Form Work, Metal Stud
Installation and Scaffold
Building Only).....\$ 24.84 11.00

CARP0101-016 07/01/2011

	Rates	Fringes
PILEDRIVERMAN.....	\$ 24.84	11.00

CARP1906-008 07/01/2015

	Rates	Fringes
MILLWRIGHT.....	\$ 36.05	30.63

ELEC0024-012 11/29/2015

	Rates	Fringes
ELECTRICIAN (Including low voltage wiring for and installation of alarms; HVAC controls).....	\$ 35.60	5.25%+15.09

ELEC0024-013 06/01/2015

	Rates	Fringes
ELECTRICIAN (Communication and Sound Equipment).....	\$ 25.88	4.75%+10.77

PAID HOLIDAYS: New Year's Day, Memorial Day, Fourth of July,
Labor Day, Veterans Day, Thanksgiving Day, Day after
Thanksgiving, Christmas Day

ENGI0037-032 04/01/2013

	Rates	Fringes
OPERATOR: Backhoe.....	\$ 27.38	12.85+a
OPERATOR: Bobcat/Skid Steer/Skid Loader.....	\$ 25.43	12.85+a
OPERATOR: Bulldozer.....	\$ 27.38	12.85+a
OPERATOR: Excavator.....	\$ 27.38	12.85+a
OPERATOR: Forklift.....	\$ 27.38	12.85+a
OPERATOR: Gradall.....	\$ 27.38	12.85+a
OPERATOR: Loader (Front End) 1 1/4 yards and over.....	\$ 27.38	12.85+a
1 Yard and Under.....	\$ 25.43	12.85+a
OPERATOR: Paver (Asphalt, Aggregate, and Concrete).....	\$ 27.38	12.85+a
OPERATOR: Roller excluding Asphalt.....	\$ 21.80	12.85+a

a. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence
Day, Labor Day, Veterans' Day, Thanksgiving Day and
Christmas Day.

 IRON0451-006 07/01/2015

	Rates	Fringes
IRONWORKER (Fence Erection, Ornamental, Reinforcing, Structural and Sheeter).....	\$ 33.60	27.40

LABO0710-004 04/01/2015

	Rates	Fringes
LABORER: Mason Tender - Cement/Concrete.....	\$ 17.87	5.85

PAIN0051-024 06/01/2013

	Rates	Fringes
PAINTER Brush, Roller, Spray, Drywall Finisher/Taper and Paperhanger.....	\$ 24.89	8.91
Industrial.....	\$ 29.18	8.91

PLAS0891-005 07/01/2013

	Rates	Fringes
PLASTERER.....	\$ 28.33	5.85

PLAS0891-006 02/01/2014

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER....	\$ 27.15	9.61

PLAS0891-008 08/01/2014

	Rates	Fringes
PLASTERER (Fireproofing Including Sprayer, Mixer, and Handler) Handler.....	\$ 16.50	4.24
Mixer/Pump.....	\$ 18.50	4.24
Sprayer.....	\$ 23.00	4.24

PLUM0486-014 04/01/2014

	Rates	Fringes
PIPEFITTER (Including HVAC Pipe Installation).....	\$ 36.545	17.59

ROOF0030-033 07/01/2015

	Rates	Fringes
--	-------	---------

ROOFER, Excludes Installation of Metal Roofs.....	\$ 25.19	9.54
--	----------	------

SFMD0669-001 04/01/2015

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 32.40	18.12

SHEE0100-026 11/01/2015

	Rates	Fringes
SHEET METAL WORKER, Includes HVAC Duct Installation (Excludes Metal Roof Installation).....	\$ 31.76	19.05

SUMD2010-081 04/30/2010

	Rates	Fringes
ABATEMENT WORKER: ASBESTOS (Removal from Mechanical Systems).....	\$ 12.60	3.91
BRICKLAYER (Excluding Pointing, Caulking and Cleaning).....	\$ 23.88	5.86
CARPENTER (Acoustical Ceiling Installation Only).....	\$ 16.00	2.60
CARPENTER, All other work.....	\$ 20.05	4.00
ELEVATOR MECHANIC.....	\$ 29.66	9.34
LABORER: Common or General.....	\$ 15.00	2.37
LABORER: Grade Checker.....	\$ 16.00	2.90
LABORER: Landscape.....	\$ 10.00	0.00
LABORER: Mason Tender - Brick...	\$ 14.76	7.73
LABORER: Mason Tender - Stone...	\$ 14.03	0.00
LABORER: Mortar Mixer.....	\$ 16.61	9.08
LABORER: Pipelayer.....	\$ 14.78	3.96
LABORER: Mason Tender (For Pointing, Caulking and Cleaning).....	\$ 12.93	0.00
MASON - STONE.....	\$ 29.82	10.05
OPERATOR: Asphalt Roller.....	\$ 21.35	5.38

OPERATOR: Boom.....	\$ 21.44	8.29
OPERATOR: Crane.....	\$ 20.17	4.64
OPERATOR: Grader/Blade.....	\$ 16.75	5.79
PLUMBER.....	\$ 27.73	10.01
<p>POINTER, CAULKER, CLEANER, Includes pointing, caulking, cleaning of existing masonry, brick, stone and cement structures (restoration work); excludes pointing, caulking, cleaning of new or replacement masonry, brick, stone or cement.....</p>		
	\$ 19.75	0.00
<p>SHEET METAL WORKER (Metal Roofs Installation).....</p>		
	\$ 20.71	6.23
TILE FINISHER.....	\$ 17.32	0.00
TILE SETTER.....	\$ 21.38	4.65
TRUCK DRIVER: Dump Truck.....	\$ 15.40	1.96

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination

- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
 Wage and Hour Division
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
 U.S. Department of Labor
 200 Constitution Avenue, N.W.
 Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION



**NOTICE OF ACTIONS REQUIRED FOR AFFIRMATIVE ACTION TO
ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidders attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as noted in Appendix A and B:

These goals are applicable to all the Contractors' construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this notification. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.
4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is noted on appendix B.

**STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (Executive Order 11246)**

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;



CONTRACT PROVISIONS
NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

CONTRACT NO. CO4125125
2 of 8

- c.** "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.
- d.** "Minority" includes:

 - (i)** Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii)** Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin regardless of race);
 - (iii)** Asian and Pacific Islander (all persons having origins in any of the original people of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and,
 - (iv)** American Indians or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
- 2.** Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
- 3.** If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.
- 4.** The Contractor shall implement the specific affirmative action standards provided in paragraphs 7.a through 7.p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goal in each craft during the period specified.
- 5.** Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.



CONTRACT PROVISIONS

CONTRACT NO. CO4125125

NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

3 of 8

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with reason therefore, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
 - e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7.b above.
 - f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the



CONTRACT PROVISIONS
NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

CONTRACT NO. CO4125125
4 of 8

policy with all management personnel and with all minority and female employees at least once a year and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

- g.** Review, at least annually, the company's EEO Policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h.** Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i.** Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j.** Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
- k.** Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
- l.** Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
- m.** Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to insure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
- n.** Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
- o.** Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.



CONTRACT PROVISIONS

CONTRACT NO. CO4125125

NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

5 of 8

- p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
- 8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7.a through 7.p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more if its obligations under 7.a through 7.p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.
- 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
- 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
- 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
- 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- 14. The Contractors shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at



CONTRACT PROVISIONS

CONTRACT NO. CO4125125

NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

6 of 8

which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents

(a.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

16. The Contractor will receive at the time of Award Federal Form CC-257 for his use in reporting monthly the Affirmative Actions for minority and female which he has employed.



CONTRACT PROVISIONS
NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

CONTRACT NO. CO4125125
7 of 8

APPENDIX A

The following goals and timetables for female utilization shall be included in all Federal and federally assisted construction contracts and subcontracts in excess of \$10,000. The goals are applicable to the Contractor's aggregate on-site construction work force whether or not part of that work force is performing on a Federal or federally assisted construction contract or subcontract.

AREA COVERED: Nationwide

GOALS AND TIMETABLES

Timetable	Goals (percent)
From April 1, 1978 until March 31, 1979.....	3.1
From April 1, 1979 until March 31, 1980.....	5.0
From April 1, 1980 until further notice.....	6.9



CONTRACT PROVISIONS
NOTICE OF ACTIONS FOR AFFIRMATIVE ACTION

APPENDIX B

Until further notice, the following goals for minority utilization in each construction craft and trade shall be included in all Federal or federally assisted construction contracts and subcontracts in excess of \$10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total on-site construction work force, regardless of whether or not part of that work force is performing work on a Federal, federally assisted or nonfederally related project, contract or subcontract.

Construction contractors which are participating in an approved Hometown Plan (see 41 CFR 60-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work such contractors are required to comply with the applicable SMSA or EA goal contained in this appendix B-80.

State	Goal (percent)
Maryland:	
019 Baltimore, MD:	
SMSA Counties:	
0720 Baltimore, MD.....	23.0
MD Anne Arundel; MD Baltimore;	
MD Carroll; MD Harford;	
MD Howard; MD Baltimore City	
Non-SMSA Counties.....	23.6
MD Caroline; MD Dorchester;	
MD Kent; MD Queen Annes;	
MD Somerset; MD Talbot;	
MD Wicomico; MD Worcester	
Washington, DC:	
020 Washington, DC:	
SMSA Counties:	
8840 Washington, DC.....	28.0
MD Charles; MD Montgomery;	
MD Prince Georges	
Non-SMSA Counties.....	25.2
MD Calvert; MD Frederick	
MD St. Marys; MD Washington	
Pennsylvania	
Non-SMSA Counties.....	4.8
MD Allegany; MD Garrett	

TRAINING PROVISIONS

As part of the Contract's Equal Employment Opportunity Affirmative Action Program, on-the-job training shall be provided as follows:

The on-the-job training shall be aimed at developing full journeypersons in the type of trade or job classification involved. On this Contract **0** persons will be trained.

In the event that a Contractor subcontracts a portion of the Contract work, the Contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor, however, the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Provision. The Contractor shall also insure that this training Provision is physically included in each subcontract to insure that the workforce utilized by the subcontractor meet the goals for minority and female employment and training. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees in each classification shall be distributed among the work classifications on the basis of the Contractor's needs, minority and women employment goals specified for each trade in the Contract Provision, and the reasonable area of recruitment.

Prior to beginning construction, the Contractor shall submit to the Administration for approval a Manpower and Training Utilization (MTU) Schedule no later than at the preconstruction meeting.

The MTU schedule shall include:

1. The proposed training programs.
2. The number of trainees to be trained in each classification.
3. Anticipated starting and ending dates for training in each classification.

No Contract work may be undertaken until the Administration has accepted the schedule.

If the submitted training programs fail to meet the requirements as defined within these Provisions, the Administration will withhold one percent of the total category code one pay items from the payment due the Contractor. The Contractor shall submit a revised Manpower and Training Utilization Schedule when major changes in the Contract work schedule occur that substantially affect the previously submitted schedule.

The Contractor shall be credited for each trainee employee who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for the hourly cost of the trainee as specified in the schedule of prices.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Provision. The purpose for this objective is to insure a pool of qualified minorities and women to replace those journeypersons who, in the natural course of events will leave the workforce. The program will also provide opportunities to the minorities and women trainees in geographic areas where shortages in minority and women journeypersons are prevalent and recognized due to the Contractor's inability to meet the Equal Employment Opportunity goals specified in this Contract.

The training requirements of this Training Provision are not intended nor shall they be used to discriminate against any applicant for training, whether a member of a protected class or not. It is the Contractor's responsibility to demonstrate good faith efforts to ensure an adequate workforce representation of minorities and women in all job classifications on this Contract. Therefore, the Contractor shall consider the employment Contract goals set for minorities and females when enrolling trainees. The Contractor's utilization of the on-the-job training goals will be weighed when an Equal Employment Opportunity workforce compliance determination is made.

The Contractor shall make every effort to enroll minority and women trainees (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minorities and women to the extent that these persons are available within a reasonable area of recruitment).

No employee shall be employed as a trainee in any classification which the individual has successfully completed a training program leading to journeyman status or has been employed as a journeyman. This includes a person gainfully employed as a journeyman by virtue of informal on-the-job training. The Contractor should satisfy this requirement by including appropriate questions in the employee job application or by other suitable means. Regardless of the method used, the Contractor's records shall document the findings in each case. In the case of apprentices, evidence of indentureship and registration of the approved apprenticeship program shall be included in the Contractor's records.

The minimum length and type of training and rate for each classification shall be specified in the training program by the Contractor and approved by the Administration and the Federal Highway Administration.

The Administration will approve any program specified in the Administration's On-The-Job Training Manual. The Administration and the Federal Highway Administration will consider other programs if it is reasonably calculated that the programs conform to the Equal Employment Opportunity obligations of the Contract and will qualify the average trainee for journeyman status in the specified classification by the end of the training period. Apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, and training programs approved by, but not necessarily sponsored by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training will also be acceptable, provided that the program being offered is administered in a manner consistent with the Equal Employment obligation of Federal-aid highway construction Contracts and meets the minimum requirements of this Training Provision.

Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Unless otherwise specified, the Contractor will be reimbursed 80 cents per hour of training given an employee on this Contract in conformance with an approved training program. As approved by the Engineer, reimbursement will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor received additional training program funds from other sources, provided that the other sources do not specifically prohibit the Contractor from receiving other reimbursement. Reimbursement for offsite training indicated above will only be made to the Contractor where the Contractor does one or more of the following and the trainees are concurrently employed on a Federal-aid project:

1. Contributes to the cost of the training.
2. Provides the instruction to the trainee or pays the trainee's wages during the offsite training period.

No payment will be made to the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman is caused by the Contractor and evidences a lack of "good faith" on the part of the Contractor in meeting the requirements of this Training Provision. It is normally expected that a trainee will begin training on the project as soon as feasible after the start of work utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or until the program is completed. It is not required that all trainees be on board for the entire length of the Contract. A Contractor will have fulfilled their responsibilities under this Training Provision when:

1. Systematic and direct recruitment likely to yield qualified minority and women applicants is conducted through:
 - a. Public and private referral sources.
 - b. Advising the existing workforce of training opportunities.
 - c. Unions (if applicable).
2. Acceptable training has been provided to trainees enrolled in the program.
3. The number of specified trainees have completed the minimum hours required in an approved training program.
4. Trainees completing approved programs are retained in the workforce as journeymen.

The Contractor shall pay the trainees at least 60 percent of the appropriate minimum journeyman's hourly rate plus the full fringe benefits specified in the Contract for the first half of the training period, 75 percent for the third quarter of the training period plus full fringe benefits, and 90 percent for the last quarter of the training period plus full fringe benefits. However, in no case shall the total hourly rate be less than the U.S. Department of Labor's unskilled laborer wage rate for the project. In addition, all trainees shall be identified as such on the certified payroll.

The Contractor shall furnish the trainee a copy of the approved training program in which the trainee is enrolled. The Contractor shall provide each trainee with a certificate showing the type and length of training satisfactorily completed. The Contractor shall submit a Certificate to the trainee in the following instances:

1. Certificate of Completion when a trainee completes the total number of hours required to complete a training program.
2. Certificate of Training when a trainee does not totally complete the required program hours.

The Contractor shall provide for the maintenance of records and furnish periodic reports inclusive of the Administration's Contractor's Semiannual Training Reports, documenting his performance under this Training Provision. The Semiannual Training Report is to be submitted by the 10th of the month following the reporting period (July 10 and January 10).



If the Contractor fails to fully comply with these Training Provisions, the Administration's Representative will make a final report of non compliance to the Administrator, who may direct the imposition of one or both of the sanctions listed below:

1. Withholding a percentage of the progress payment.
2. Other action appropriate and/or within the discretion of the Administrator.



NOTICE TO ALL HOLDERS OF THIS CONTRACT DOCUMENT

HIGH VISIBILITY SAFETY APPAREL POLICY

BACKGROUND. Research indicates that high visibility garments have a significant impact on the safety of employees who work on highways and rights-of-way. In addition, high visibility garments may help to prevent injuries and accidents and to make highway workers more visible to the motoring public, which ultimately improves traffic safety.

STATEMENT OF POLICY.

- (a) The High Visibility Safety Apparel Policy provides a standardized apparel program.
- (b) The program seeks to improve the visibility of all persons who work on Administration highways and rights-of-way.
- (c) All apparel shall contain the appropriate class identification label.
- (d) Compliance with this policy is retroactive and becomes effective immediately. All affected employees shall receive high visibility apparel awareness training.

APPLICABILITY. This policy applies to all Administration employees and all other persons who work on Administration highways and rights-of-way. All workers shall wear, at a minimum, Class 2 ANSI/ISEA 107/2004 apparel.

- (a) For Administration employees, this apparel shall have a fluorescent yellow-green background material color and be the outermost garment worn.
- (b) Retro-reflective material color for Administration employee apparel shall be silver or white and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel shall be designed to clearly recognize and differentiate the wearer from the surrounding work environment. The retro-reflective material may be contrasted by fluorescent orange background material not exceeding one and one half inches on either side of the retro-reflective material.
- (c) For non-Administration employees, this apparel shall be either fluorescent orange-red or fluorescent yellow-green background material color and be the outermost garment worn.
- (d) Retro-reflective material color for non-Administration employee apparel shall either be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel shall be designed to clearly recognize and differentiate the wearer from the surrounding work environment.



CONTRACT PROVISIONS
HIGH VISIBILITY SAFETY APPAREL POLICY

CONTRACT NO. CO4125125
2 of 2

REFERENCES.

- (a) ANSI/ISEA 107/2004 standard – American National Safety Institute/International Safety Equipment Association
- (b) MUTCD 2003 – Manual for Uniform Traffic Control Devices - Sections 6D.03B and 6E.02
- (c) Visibility Research – The VCTR 1989 report concludes that fluorescent colors, when compared with non-fluorescent colors, enhance the daytime conspicuity of worker clothing.

DEFINITIONS.

- (a) Apparel – The outermost high-visibility garment worn by employees who work on Administration highways and rights-of-way.
- (b) Highways – All roads owned by the Maryland Department of Transportation and maintained by the Administration.
- (c) High Visibility – The ability for workers to be distinguishable as human forms to be seen, day and night, at distances that allow equipment operators and motorists to see, recognize, and respond.



Town of Denton

Wharves at Choptank Crossing

CONTRACT PROVISIONS
PROPOSAL FORM PACKET — FEDERAL

CONTRACT NO. CO4125125
FAP NO. STP-3(434)E

TOWN OF DENTON PROPOSAL FORM

Proposal by _____

Name

Address (Street and/or P.O. Box)

City

State

Zip

()

()

A.C. Phone No.

A.C. Fax No.

to furnish and deliver all materials and to do and perform all work, in conformance with the Standard Specifications, revisions thereto, General Provisions and the Special Provisions in this contract to Mr. Donald H. Mulrine, Jr. located in, Caroline County, Maryland, for which Invitation for Bids will be received until 12:00 o'clock noon on ___ day of ___, this work being situated as follows:

To the Town of Denton
Town Administrator
4 North 2nd Street
Denton, Maryland 21629

In response to the advertisement by the Administration, inviting bids for the work in conformance with the Contract Documents, now on file in the office of the Administration. I/We hereby certify that I/we am/are the only person, or persons, interested in this bid proposal as principals, and that an examination has been made of the work site, the Specifications, the Plans, and Invitation for Bids, including the Special Provisions contained herein. I/We propose to furnish all necessary machinery, equipment, tools, labor and other means of construction, and to furnish all materials required to complete the project at the following unit price or lump sum price.



GENERAL MATERIAL REQUIREMENTS

CONVICT PRODUCED MATERIALS

Section 1019 of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) clarifies that materials produced by convict labor after July 1, 1991 may not be used for Federal-aid highway construction projects unless produced at a prison facility producing convict made materials for Federal-aid construction projects prior to July 1, 1987.

CONTRACT PROVISION BUY AMERICA

This section only applies to projects partially or totally financed with Federal funds. The Contractor shall comply with Section 165 of the Surface Transportation Assistance Act of 1982 as amended by Section 1041(a) and 1048(a) of the Intermodal Surface Transportation Efficiency Act of 1991 with regard to the furnishing and coating of iron and steel products.

The Contract, if awarded, will be awarded to the responsive and responsible bidder who submits the lowest total bid for the Contract based on furnishing Domestic Products unless such bid exceeds the lowest total bid based on furnishing Foreign Products by more than twenty five percent (25%). Foreign Products will not be permitted to be used as a substitution for Domestic ones after the bid has been awarded.

Furnish steel or iron construction materials, including coating, for permanently incorporated work according to 23 CFR 635.410 and as follows:

- (a)** All manufacturing processes of steel or iron materials in a product, including coating; and any subsequent process that alters the steel or iron material's physical form or shape, changes its chemical composition, or the final finish; are to occur within the United States (One of the 50 States, the District of Columbia, Puerto Rico, or in territories and possessions of the U.S.). Manufacturing begins with the initial melting and mixing, and continues through the coating stage. The processes include rolling, extruding, machining, bending, grinding, drilling, welding, and coating. The action of applying a coating to steel or iron is deemed a manufacturing process. Coating includes epoxy coating, galvanizing, aluminizing, painting, and any other coating that protects or enhances the value of steel or iron. Any process from the original reduction from ore to the finished product constitutes a manufacturing process for iron.

- (b)** The following are considered to be steel manufacturing processes:



CONTRACT PROVISIONS
PROPOSAL FORM PACKET — FEDERAL

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
4 of 45

- (1) Production of steel by any of the following processes:
 - (a) Open hearth furnace.
 - (b) Basic oxygen.
 - (c) Electric furnace.
 - (d) Direct reduction.

- (2) Rolling, heat treating, and any other similar processing.

- (3) Fabrication of the products:
 - (a) Spinning wire into cable or strand.
 - (b) Corrugating and rolling into culverts.
 - (c) Shop fabrication.

- (c) The manufacturing process for a steel/iron product is considered complete when the product is ready for use as an item (e.g., fencing, posts, girders, pipe, manhole cover, etc.) or could be incorporated as a component of a more complex product through a further manufacturing process (e.g., prestressed concrete girders, reinforced concrete pipe, traffic control devices, bearing pads, etc.). A product containing both steel and/or iron components, may be assembled outside the United States and meet Buy America requirements if the constituent steel and iron components (in excess of the minimal amounts permitted) were manufactured domestically and are not modified at the assembly location prior to final assembly.

- (d) If domestically produced steel billets or iron ingots are exported outside of the U.S., as defined above, for any manufacturing process then the resulting product does not conform to the Buy America requirements. Additionally, products manufactured domestically from foreign source steel billets or iron ingots do not conform to the Buy America requirements because the initial melting and mixing of alloys to create the material occurred in a foreign country.

- (e) Due to a nationwide waiver, Buy America does not apply to raw materials (iron ore and alloys), scrap (recycled steel or iron), and pig iron or processed, pelletized, and reduced iron ore.

- (f) For the Buy America provisions to apply, the steel or iron product must be permanently incorporated into the project. If an item is rendered as a “donated material” in accordance with 23 U.S.C. 323 – Donations and Credits, it will have to comply with Buy America requirements. While States and local governments may receive a credit for donated material, this material must generally comply with Buy America requirements. Buy America does not apply to temporary steel items, e.g., temporary sheet piling, temporary



CONTRACT PROVISIONS
PROPOSAL FORM PACKET — FEDERAL

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E

bridges, steel scaffolding and falsework. Further, Buy America does not apply to materials which remain in place at the contractor convenience.

- (g) Certifications which document that steel and iron have been manufactured and that coatings for iron or steel have been applied in the United States shall be provided to the Contractor by the manufacturer. The Contractor shall provide the required certifications to the Engineer prior to such items being incorporated into the permanent work. Certifications shall extend to materials utilized in manufactured and fabricated products purchased by the Contractor.
- (h) Products manufactured of foreign steel or iron materials may be used, provided the cost of such products as they are delivered to the project does not exceed 0.1% of the total contract amount, or \$2,500, whichever is greater. If a supplier or fabricator wishes to use a partial fabrication process where domestic and foreign source components are assembled at a domestic location, the “as delivered cost” of the foreign components should include any transportation, assembly and testing costs required to install them in the final product.
- (i) These provisions do not apply to any manufactured product unless the final product consists of at least 90% steel or iron content when it is delivered to the job site for installation. The miscellaneous steel or iron components, subcomponents and hardware necessary to encase, assemble and construct the manufactured product are not subject to the Buy America provision. For more information refer to FHWA Memorandum of Action entitled Clarification of Manufactured Products under Buy America, dated December 21, 2012 (available at <http://www.fhwa.dot.gov/construction/contracts/121221.cfm>).



**ALTERNATE BID
USING FOREIGN PRODUCTS**

When a bidder elects to utilize Foreign Products on one or more items, the following summation indicating the Total Bid using Foreign Products must be completed in addition to the individual item bid tabulations.

The following instructions are given to the bidder in completing the Total Bid summation using Foreign Products:

- 1 - The "Bid Total" for the initial bid using Domestic Products shall be shown on line (1).
- 2 - The subtotal for Item Amounts using Domestic Products shall be shown on line (2), for those items which the Contractor elects to use Foreign Products.
- 3 - The subtotal for Item Amounts using Foreign Products shall be shown on line (3).
- 4 - The total Bid, utilizing Foreign Products shall be shown on line (4). The value is obtained by subtracting subtotal (2) from the Total Bid (1) and then adding subtotal (3).

Bid Total for Bid 1 using Domestic items	Line (1)_____
Total of Domestic Items	Line (2) - _____
Total of Foreign Items	Line (3) + _____
Bid Total using Foreign Items	Line (4)_____

ALTERNATE BID - USING FOREIGN PRODUCTS
 BIDDER'S INSTRUCTIONS

When the bidder elects to submit a bid for one or more items using Foreign Products, the following form must be used. For each item that Foreign Products are contemplated, the appropriate "Item Numbers", "Approximate Quantities", "Description of Items", "Unit Price or Lump Sum Price", "Item Amount Domestic" and "Item Amount Foreign" shall be tabulated below as specified in the initial bid. The bidder shall indicate the unit price in dollars and cents and show the total cost of the item for each item that utilizes Foreign Products. When all items utilizing Foreign Products have been listed, the bidder shall indicate on Page 4 of 20 the subtotals of the Item Amounts for Domestic Products in Line (2) and for Foreign Products in Line (3).

Item Nos.	Approximate Quantities	Description of Items	Unit Price or Lump Sum Dollars.Cts.	Items Amount Domestic Dollars.Cts.	Items Amount Foreign Dollars.Cts.



BID/PROPOSAL AFFIDAVIT

A. AUTHORIZED REPRESENTATIVE AND AFFIANT

I HEREBY AFFIRM THAT:

I am the (title) _____ and the duly authorized representative of (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. CERTIFICATION REGARDING COMMERCIAL NONDISCRIMINATION

The undersigned bidder or offeror hereby certifies and agrees that the following information is correct:

In preparing its bid on this project, the bidder or offeror has considered all proposals submitted from qualified, potential subcontractors and suppliers, and has not engaged in “discrimination” as defined in §19-103 of the State Finance and Procurement Article of the Annotated Code of Maryland. “Discrimination” means any disadvantage, difference, distinction, or preference in the solicitation, selection, hiring, or commercial treatment of a vendor, subcontractor, or commercial customer on the basis of race, color, religion, ancestry, or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or any otherwise unlawful use of characteristics regarding the vendors, supplier’s or commercial customer’s employees or owners. “Discrimination” also includes retaliating against any person or other entity for reporting any incident of “discrimination”. Without limiting any other provision of the solicitation on this project, it is understood that, if the certification is false, such false certification constitutes grounds for the State to reject the bid submitted by the bidder or offeror on this project, and terminate any contract awarded based on the bid. As part of its bid or proposal, the bidder or offeror herewith submits a list of all instances within the past 4 years where there has been a final adjudicated determination in a legal or administrative proceeding in the state of Maryland that the bidder or offeror discriminated against subcontractors, vendors, suppliers, or commercial customers, and a description of the status or resolution of that determination, including any remedial action taken. Bidder or Offeror agrees to comply in all respects with the State’s Commercial Nondiscrimination Policy as described under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland.



C. AFFIRMATION REGARDING BRIBERY CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business (as is defined in Section 16-101(b) of the State Finance and Procurement Article of the Annotated Code of Maryland), or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities, including obtaining or performing contracts with public bodies, has been convicted of, or has had probation before judgment imposed pursuant to Criminal Procedure Article, §6-220, 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):

D. AFFIRMATION REGARDING OTHER CONVICTIONS

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business's contracting activities including obtaining or performing contracts with public bodies, has:

1. Been convicted under state or federal statute of:
(a) a criminal offense incident to obtaining, attempting to obtain, or performing a public or private contract; or

(b) 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



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
10 of 45

Fraud Act, 18 U.S.C. §1341, et seq., for acts in connection with 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 a violation of the Section 11-205.1 of the State Finance and Procurement Article of the Annotated Code of Maryland;

6. 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) through (5) above;

7. 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;

8. Been found in a final adjudicated decision to have violated the Commercial Nondiscrimination Policy under Title 19 of the State Finance and Procurement Article of the Annotated Code of Maryland with regard to a public or private contract; or

9. 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 in Section B – C and subsections (1) through (8) 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):

E. AFFIRMATION REGARDING DEBARMENT

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business, or any of its officers, directors, partners, controlling stockholders, or any of its employees directly involved in the business’s contracting activities, including 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



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
11 of 45

of the proceedings, 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): _____

F. 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):

G. SUB-CONTRACT AFFIRMATION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above 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.

H. AFFIRMATION REGARDING COLLUSION

I FURTHER AFFIRM THAT:

Neither I, nor to the best of my knowledge, information, and belief, the above business has:



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
12 of 45

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 taken any action in restraint of free competitive bidding in connection with the contract for which the accompanying bid or offer is submitted.

I. FINANCIAL DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, the provisions of Section 13-221 of the State Finance and Procurement Article of the Annotated Code of Maryland, which require that every business that enters into contracts, leases, or other agreements with the State of Maryland or its agencies during a calendar year under which the business is to receive in the aggregate \$100,000 or more shall, within 30 days of the time when the aggregate value of the contracts, leases, or other agreements reaches \$100,000, file with the Secretary of State of Maryland certain specified information to include disclosure of beneficial ownership of the business.

J. POLITICAL CONTRIBUTION DISCLOSURE AFFIRMATION

I FURTHER AFFIRM THAT:

I am aware of, and the above business will comply with, Election Law Article, §§14-101—14-108, Annotated Code of Maryland, which requires that every person that enters into contracts, leases, or other agreements with the State of Maryland, including its agencies or a political subdivision of the State, during a calendar year in which the person receives in the aggregate \$100,000 or more shall file with the State Board of Elections a statement disclosing contributions in excess of \$500 made during the reporting period to a candidate for elective office in any primary or general election.

K. DRUG AND ALCOHOL FREE WORKPLACE

(Applicable to all contracts unless the contract is for a law enforcement agency and the agency head or the agency head's designee has determined that application of COMAR 21.11.08 and this certification would be inappropriate in connection with the law enforcement agency's undercover operations.)



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
13 of 45

I CERTIFY THAT:

1. Terms defined in COMAR 21.11.08 shall have the same meanings when used in this certification.
2. By submission of its bid or offer, the business, if other than an individual, certifies and agrees that, with respect to its employees to be employed under a contract resulting from this solicitation, the business shall:
 - (a) Maintain a workplace free of drug and alcohol abuse during the term of the contract;
 - (b) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of drugs, and the abuse of drugs or alcohol is prohibited in the business' workplace and specifying the actions that will be taken against employees for violation of these prohibitions;
 - (c) Prohibit its employees from working under the influence of drugs or alcohol;
 - (d) Not hire or assign to work on the contract anyone whom the business knows, or in the exercise of due diligence should know, currently abuses drugs or alcohol and is not actively engaged in a bona fide drug or alcohol abuse assistance or rehabilitation program;
 - (e) Promptly inform the appropriate law enforcement agency of every drug-related crime that occurs in its workplace if the business has observed the violation or otherwise has reliable information that a violation has occurred;
 - (f) Establish drug and alcohol abuse awareness programs to inform its employees about:
 - (i) The dangers of drug and alcohol abuse in the workplace;
 - (ii) The business' policy of maintaining a drug and alcohol free workplace;
 - (iii) Any available drug and alcohol counseling, rehabilitation, and employee assistance programs; and
 - (iv) The penalties that may be imposed upon employees who abuse drugs and alcohol in the workplace;
 - (g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §K(2)(b), above;
 - (h) Notify its employees in the statement required by §K(2)(b), above, that as a condition of continued employment on the contract, the employee shall:



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
14 of 45

- (i) Abide by the terms of the statement; and
 - (ii) Notify the employer of any criminal drug or alcohol abuse conviction for an offense occurring in the workplace not later than 5 days after a conviction;
- (i) Notify the procurement officer within 10 days after receiving notice under §K(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;
- (j) Within 30 days after receiving notice under §K(2)(h)(ii), above, or otherwise receiving actual notice of a conviction, impose either of the following sanctions or remedial measures on any employee who is convicted of a drug or alcohol abuse offense occurring in the workplace:
 - (i) Take appropriate personnel action against an employee, up to and including termination; or
 - (ii) Require an employee to satisfactorily participate in a bona fide drug or alcohol abuse assistance or rehabilitation program; and
- (k) Make a good faith effort to maintain a drug and alcohol free workplace through implementation of §K(2)(a)—(j), above.
- 3. If the business is an individual, the individual shall certify and agree as set forth in §K(4), below, that the individual shall not engage in the unlawful manufacture, distribution, dispensing, possession, or use of drugs or the abuse of drugs or alcohol in the performance of the contract.
- 4. I acknowledge and agree that:
 - (a) The award of the contract is conditional upon compliance with COMAR 21.11.08 and this certification;
 - (b) The violation of the provisions of COMAR 21.11.08 or this certification shall be cause to suspend payments under, or terminate the contract for default under COMAR 21.07.01.11 or 21.07.03.15, as applicable; and
 - (c) The violation of the provisions of COMAR 21.11.08 or this certification in connection with the contract may, in the exercise of the discretion of the Board of Public Works, result in suspension and debarment of the business under COMAR 21.08.03.



L. CERTIFICATION OF CORPORATION REGISTRATION AND TAX PAYMENT

I FURTHER AFFIRM THAT:

- 1 The business named above is a (domestic ___) (foreign ___) corporation registered in accordance with the Corporations and Associations Article, Annotated Code of Maryland, and that it is in good standing and has 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 (IF NOT APPLICABLE, SO STATE):

Name: _____
 Address: _____

- 2. Except as validly contested, the business has paid, or has arranged for payment of, all taxes due the State of Maryland and has filed all required returns and reports with the Comptroller of the Treasury, the State Department of Assessments and Taxation, and the Department of Labor, Licensing, and Regulation, as applicable, and will have paid all withholding taxes due the State of Maryland prior to final settlement.

M. 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, bona fide agent, bona fide salesperson, or commercial selling agency 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, bona fide agent, bona fide salesperson, or commercial selling agency, any fee or any other consideration contingent on the making of the Contract.

N. REPEALED



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
16 of 45

O. ACKNOWLEDGEMENT

I ACKNOWLEDGE THAT this Affidavit is to be furnished to the Procurement Officer and may be distributed to units of: (1) the State of Maryland; (2) counties or other subdivisions of the State of Maryland; (3) other states; and (4) 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 the State of Maryland, or any unit of the State of Maryland having jurisdiction, the exercise of any statutory right or remedy conferred by the Constitution and the laws of Maryland with respect to any misrepresentation made or any violation of the obligations, terms and covenants undertaken by the above business with respect to (1) this Affidavit, (2) 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.

Date: _____

By: _____
(Authorized Representative and Affiant)



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
17 of 45

COMPREHENSIVE SIGNATURE PAGE 1 OF 2

THE BIDDER IS HEREBY NOTIFIED THAT THIS DOCUMENT SHALL BE SIGNED IN INK IN ORDER FOR THE BID TO BE ACCEPTED. BY SIGNING, THE BIDDER CERTIFIES THAT HE/SHE WILL COMPLY IN EVERY ASPECT WITH THESE SPECIFICATIONS.

FURTHER, I DO SOLEMNLY DECLARE AND AFFIRM UNDER THE PENALTIES OF PERJURY THAT THE CONTENTS OF THIS AFFIDAVIT (PARAGRAPHS A-N) ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF.

This bid form shall be filled out legibly in ink or typed. The bid, if submitted by an individual, shall be signed by an individual; if submitted by a partnership, shall be signed by such member or members of the partnership as have authority to bind the partnership; if submitted by a corporation the same shall be signed by the President and attested by the Secretary or an Assistant Secretary. If not signed by the President as aforesaid, there must be attached a copy of that portion of the By-Laws, or a copy of a Board resolution, duly certified by the Secretary, showing the authority of the person so signing on behalf of the corporation. In lieu thereof, the corporation may file such evidence with the Administration, duly certified by the Secretary, together with a list of the names of those officers having authority to execute documents on behalf of the corporation, duly certified by the Secretary, which listing shall remain in full force and effect until such time as the Administration is advised in writing to the contrary. In any case where a bid is signed by an Attorney in Fact the same must be accompanied by a copy of the appointing document, duly certified.

IF AN INDIVIDUAL:

NAME: _____

_____ Street and/or P.O. Box

_____ City State Zip Code Fed ID or SSN

_____ Signature (SEAL) Date

_____ Print Signature

WITNESS: _____

Signature

_____ Print Signature



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
18 of 45

COMPREHENSIVE SIGNATURE PAGE 2 OF 2

IF A PARTNERSHIP:

NAME OF PARTNERSHIP: _____

_____ Street and/or P.O. Box

_____ City State Zip Code Fed ID or SSN

BY: _____ (SEAL) _____ Date
Member Signature

_____ Print Signature

TITLE: _____ WITNESS: _____ Signature

_____ Print Signature

IF A CORPORATION:

NAME OF CORPORATION: _____

_____ Street and/or P.O. Box

_____ City State Zip Code Fed ID or SSN

STATE OF INCORPORATION: _____

BY: _____ (SEAL) _____ Date
Signature

_____ Print Signature

TITLE: _____ WITNESS: _____ Secretary's Signature

_____ Print Signature



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
19 of 45

**MDOT DBE FORM A
FEDERALLY-FUNDED CONTRACTS
CERTIFIED DBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
PAGE 1 OF 2**

This affidavit must be included with the bid/ proposal. If the bidder/offeror fails to accurately complete and submit this affidavit as required, the bid shall be deemed not responsive or the proposal shall be deemed not susceptible of being selected for award.

In connection with the bid/proposal submitted in response to Solicitation No. _____, I affirm the following:

1. DBE Participation (PLEASE CHECK ONLY ONE)

I have met the overall certified Disadvantaged Business Enterprise (DBE) participation goal of eleven percent (11%). I agree that this percentage of the total dollar amount of the Contract for the DBE goal will be performed by certified DBE firms as set forth in the DBE Participation Schedule - Part 2 of the MDOT DBE Form B (Federally-Funded Contracts).

OR

I conclude that I am unable to achieve the DBE participation goal. I hereby request a waiver, in whole or in part, of the goal. Within 10 business days of receiving notice that our firm is the apparent awardee or as requested by the Procurement Officer, I will submit a written waiver request and all required documentation in accordance with COMAR 21.11.03.11. For a partial waiver request, I agree that certified DBE firms will be used to accomplish the percentages of the total dollar amount of the Contract as set forth in the DBE Participation Schedule - Part 2 of the MDOT DBE Form B (Federally-Funded Contracts).

2. Additional DBE Documentation

I understand that if I am notified that I am the apparent awardee or as requested by the Procurement Officer, I must submit the following documentation within 10 business days of receiving such notice: (a) Outreach Efforts Compliance Statement (MDOT DBE Form C - Federally-Funded Contracts); (b) Subcontractor Project Participation Statement (MDOT DBE Form D - Federally-Funded Contracts); (c) DBE Waiver Request documentation per COMAR 21.11.03.11 (if waiver was requested); and (d) Any other documentation required by the Procurement Officer to ascertain bidder's responsibility/ offeror's susceptibility of being selected for award in connection with the certified DBE participation goal.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
20 of 45

MDOT DBE FORM A
FEDERALLY-FUNDED CONTRACTS
CERTIFIED DBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
PAGE 2 OF 2

I acknowledge that if I fail to return each completed document (in 2 (a) through (d)) within the required time, the Procurement Officer may determine that I am not responsible and therefore not eligible for contract award or not susceptible of being selected for award.

3. Information Provided to DBE firms

In the solicitation of subcontract quotations or offers, DBE firms were provided not less than the same information and amount of time to respond as were non-DBE firms.

4. Products and Services Provided by DBE firms

I hereby affirm that the DBEs are only providing those products and services for which they are MDOT certified.

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

Company Name

Signature of Representative

Address

Printed Name and Title

City, State and Zip Code

Date



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
21 of 45

**MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE**

PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID/PROPOSAL. IF THE BIDDER/OFFEROR FAILS TO ACCURATELY COMPLETE AND SUBMIT PART 2 WITH THE BID/PROPOSAL AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE OR THE PROPOSAL SHALL BE DEEMED NOT SUSCEPTIBLE OF BEING SELECTED FOR AWARD.

PAGE 1 OF 4

***** STOP *****

**FORM INSTRUCTIONS
PLEASE READ BEFORE COMPLETING THIS FORM**

1. Please refer to the Maryland Department of Transportation (MDOT) DBE Directory at www.mdot.state.md.us to determine if a firm is certified for the appropriate North American Industry Classification System (“NAICS”) Code **and** the product/services description (specific product that a firm is certified to provide or specific areas of work that a firm is certified to perform). For more general information about NAICS, please visit www.naics.com. Only those specific products and/or services for which a firm is certified in the MDOT Directory can be used for purposes of achieving the DBE participation goal.
2. In order to be counted for purposes of achieving the DBE participation goal, the firm must be certified for that specific NAICS (“DBE” for Federally-funded projects designation after NAICS Code). **WARNING:** If the firm’s NAICS Code is in **graduated status**, such services/products **will not be counted** for purposes of achieving the DBE participation goals. Graduated status is clearly identified in the MDOT Directory (such graduated codes are designated with the word graduated after the appropriate NAICS Code).
3. Examining the NAICS Code is the **first step** in determining whether a DBE firm is certified and eligible to receive DBE participation credit for the specific products/services to be supplied or performed under the contract. The **second step** is to determine whether a firm’s Products/Services Description in the DBE Directory includes the products to be supplied and/or services to be performed that are being used to achieve the DBE participation goal.
4. If you have any questions as to whether a firm is MDOT DBE certified, or if it is certified to perform specific services or provide specific products, please call MDOT’s Office of Minority Business Enterprise at 1-800-544-6056 or send an email to mbe@mdot.state.md.us.



MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE
PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
PAGE 2 OF 4

5. The Contractor's subcontractors are considered second-tier subcontractors. Third-tier contracting used to meet a DBE goal is to be considered the exception and not the rule. The following two conditions must be met before MDOT, its Modal Administrations and the Maryland Transportation Authority may approve a third-tier contracting agreement: (a) the bidder/offeror must request in writing approval of each third-tier contract arrangement, and (b) the request must contain specifics as to why a third-tier contracting arrangement should be approved. These documents must be submitted with the bid/proposal in Part 2 of this DBE Participation Schedule.
6. For each DBE firm that is being used as supplier/wholesaler/regular dealer/broker/manufacturer, please follow these instructions for calculating the **amount of the subcontract for purposes of achieving the DBE participation goal:**
 - A. Is the firm certified as a broker of the products/supplies? If the answer is YES, please continue to Item C. If the answer is NO, please continue to Item B.
 - B. Is the firm certified as a supplier, wholesaler, regular dealer, or manufacturer of such products/supplies? If the answer is YES, continue to Item D. If the answer is NO, continue to Item C only if the DBE firm is certified to perform trucking/hauling services under NAICS Codes 484110, 484121, 484122, 484210, 484220 and 484230. If the answer is NO and the firm is not certified under these NAICS Codes, then no DBE participation credit will be given for the supply of these products.
 - C. For purposes of achieving the DBE participation goal, you may count only the amount of any reasonable fee that the DBE firm will receive for the provision of such products/supplies - not the total subcontract amount or the value (or a percentage thereof) of such products and/or supplies. For Column 3 of the DBE Participation Schedule, please divide the amount of any reasonable fee that the DBE firm will receive for the provision of such products/services by the total Contract value and insert the percentage in Line 3.1.
 - D. Is the firm certified as a manufacturer (refer to the firm's NAICS Code and specific description of products/services) of the products/supplies to be provided? If the answer is NO please continue to Item E. If the answer is YES, for purposes of achieving the DBE participation goal, you may count the total amount of the subcontract. For Column 3 of the DBE Participation Schedule, please divide the total amount of the subcontract by the total Contract value and insert the percentage in Line 3.1.



MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE
PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
PAGE 3 OF 4

- E. Is the firm certified as a supplier, wholesaler and/or regular dealer? If the answer is YES and the DBE firm is furnishing and installing the materials and is certified to perform these services, please divide the total subcontract amount (including full value of supplies) by the total Contract value and insert the percentage in Line 3.1. If the answer is YES and the DBE firm is only being used as a supplier, wholesaler and/or regular dealer or is not certified to install the supplies/materials, for purposes of achieving the DBE participation goal, you may only count sixty percent (60%) of the value of the subcontract for these supplies/products (60% Rule). To apply the 60% Rule, first divide the amount of the subcontract for these supplies/products only (not installation) by the total Contract value. Then, multiply the result by sixty percent (60%) and insert the percentage in Line 3.2.
7. For each DBE firm that **is not** being used as a supplier/wholesaler/regular dealer/broker/manufacturer, to calculate the **amount of the subcontract for purposes of achieving the DBE participation goal**, divide the total amount of the subcontract by the total Contract value and insert the percentage in Line 3.1.
- Example:** \$ 2,500 (Total Subcontract Amount) ÷ \$10,000 (Total Contract Value) x 100 = 25%.
8. Please note that for USDOT-funded projects, a DBE prime may count towards its DBE participation goal work performed by its own forces. Include information about the DBE prime in Part 2.
9. **WARNING:** The percentage of DBE participation, computed using the dollar amounts in Column 3 for all of the DBE firms listed in Part 2, **MUST** at least equal the DBE participation goal as set forth in MDOT DBE Form A – Federally-Funded Contracts for this solicitation. If the bidder/offeror is unable to achieve the DBE participation goals, then the bidder/offeror must request a waiver in Form A or the bid will be deemed not responsive, or the proposal not susceptible of being selected for award. You may wish to use the Goal Worksheet shown below to assist you in calculating the percentage and confirming that you have met the applicable DBE participation goal.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
24 of 45

MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE
PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
PAGE 4 OF 4

GOAL WORKSHEET	
Total DBE Firm Participation (Add percentages in Column 3 for all DBE firms listed in DBE Participation Schedule)	(A) _____%
The percentage amount in Box A above should be equal to the percentage amount in Box E below.	
Add <i>Countable</i> Subcontract Amounts (see 6 through 8 of Instructions) for all DBE firms listed in DBE Participation Schedule, and insert in Box B	(B) \$ _____
Insert the Total Contract Amount in Box C	(C) \$ _____
Divide Box B by Box C and Insert in Box D	(D) = _____
Multiply Box D by 100 and insert in Box E	(E) = _____%



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
25 of 45

**MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE
PART 2 – DBE PARTICIPATION SCHEDULE**

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID/PROPOSAL. IF THE BIDDER/OFFEROR FAILS TO ACCURATELY COMPLETE AND SUBMIT PART 2 WITH THE BID/PROPOSAL AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE OR THE PROPOSAL SHALL BE DEEMED NOT SUSCEPTIBLE OF BEING SELECTED FOR AWARD.

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

LIST INFORMATION FOR EACH CERTIFIED DBE SUBCONTRACTOR YOU AGREE TO USE TO ACHIEVE THE DBE PARTICIPATION GOAL.

COLUMN 1	COLUMN 2	COLUMN 3
		Unless the bidder/offeror requested a waiver in MDOT DBE Form A – Federally Funded Contracts for this solicitation, the cumulative DBE participation for all DBE firms listed herein must equal at least the DBE participation goal set forth in Form A.
NAME OF DBE SUBCONTRACTOR AND TIER	CERTIFICATION NO. AND DBE CLASSIFICATION	FOR PURPOSES OF ACHIEVING THE DBE PARTICIPATION GOAL, refer to sections 6, 7 and 8 in Part 1 - Instructions. State the percentage amount of the products/services in Line 3.1, except for those products or services where the DBE firm is being used as a wholesaler, supplier, or regular dealer. For items of work where the DBE firm is being used as a supplier, wholesaler and/or regular dealer, complete Line 3.2 using the 60% Rule.
<input type="checkbox"/> Please check if DBE firm is a third-tier contractor (if applicable). Please submit written documents in accordance with Section 5 of Part 1 - Instructions	Certification Number: <hr/> (If dually certified, check only one box.) <input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American- Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other DBE Classification <hr/>	3.1. TOTAL PERCENTAGE TO BE PAID TO THE SUBCONTRACTOR (STATE THIS PERCENTAGE AS A PERCENTAGE OF THE TOTAL CONTRACT VALUE- EXCLUDING PRODUCTS/SERVICES FROM SUPPLIERS, WHOLESALERS OR REGULAR DEALERS). _____% (Percentage for purposes of calculating achievement of DBE Participation goal) 3.2 TOTAL PERCENTAGE TO BE PAID TO THE SUBCONTRACTOR FOR ITEMS OF WORK WHERE THE DBE FIRM IS BEING USED AS A SUPPLIER, WHOLESALER AND/OR REGULAR DEALER) (STATE THE PERCENTAGE AS A PERCENTAGE OF THE TOTAL CONTRACT VALUE AND THEN APPLY THE 60% RULE PER SECTION 6(E) IN PART 1 - INSTRUCTIONS). _____% Total percentage of Supplies/Products x _____ 60% (60% Rule) _____% (Percentage for purposes of calculating achievement of DBE Participation goal)

Please check if Continuation Sheets are attached.



**MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE
CONTINUATION SHEET**

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

LIST INFORMATION FOR EACH CERTIFIED DBE SUBCONTRACTOR YOU AGREE TO USE TO ACHIEVE THE DBE PARTICIPATION GOAL.

COLUMN 1	COLUMN 2	COLUMN 3
		Unless the bidder/offeror requested a waiver in MDOT DBE Form A – Federally Funded Contracts for this solicitation, the cumulative DBE participation for all DBE firms listed herein must equal at least the DBE participation goal set forth in Form A.
NAME OF DBE SUBCONTRACTOR AND TIER	CERTIFICATION NO. AND DBE CLASSIFICATION	FOR PURPOSES OF ACHIEVING THE DBE PARTICIPATION GOAL, refer to sections 6, 7 and 8 in Part 1 - Instructions. State the percentage amount of the products/services in Line 3.1, except for those products or services where the DBE firm is being used as a wholesaler, supplier, or regular dealer. For items of work where the DBE firm is being used as a supplier, wholesaler and/or regular dealer, complete Line 3.2 using the 60% Rule.
<input type="checkbox"/> Please check if DBE firm is a third-tier contractor (if applicable). Please submit written documents in accordance with Section 5 of Part 1 - Instructions	Certification Number: <hr/> (If dually certified, check only one box.) <input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American-Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other DBE Classification <hr/>	3.1. TOTAL PERCENTAGE TO BE PAID TO THE SUBCONTRACTOR (STATE THIS PERCENTAGE AS A PERCENTAGE OF THE TOTAL CONTRACT VALUE- EXCLUDING PRODUCTS/SERVICES FROM SUPPLIERS, WHOLESALERS OR REGULAR DEALERS). _____ % (Percentage for purposes of calculating achievement of DBE Participation goal) 3.2 TOTAL PERCENTAGE TO BE PAID TO THE SUBCONTRACTOR FOR ITEMS OF WORK WHERE THE DBE FIRM IS BEING USED AS A SUPPLIER, WHOLESALER AND/OR REGULAR DEALER) (STATE THE PERCENTAGE AS A PERCENTAGE OF THE TOTAL CONTRACT VALUE AND THEN APPLY THE 60% RULE PER SECTION 6(E) IN PART 1 - INSTRUCTIONS). _____ % Total percentage of Supplies/Products x _____ 60% (60% Rule) _____ % (Percentage for purposes of calculating achievement of DBE Participation goal)

Please check if Continuation Sheets are attached.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
27 of 45

**MDOT DBE FORM B
FEDERALLY-FUNDED CONTRACTS
DBE PARTICIPATION SCHEDULE**

PART 3 – CERTIFICATION FOR DBE PARTICIPATION SCHEDULE

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID/PROPOSAL AS DIRECTED IN THE SOLICITATION.

I hereby affirm that I have reviewed the Products and Services Description (specific product that a firm is certified to provide or areas of work that a firm is certified to perform) set forth in the MDOT DBE Directory for each of the DBE firms listed in Part 2 of this DBE Form B for purposes of achieving the DBE participation goal that was identified in the DBE Form A that I submitted with this solicitation, and that the DBE firms listed are only performing those products/services/areas of work for which they are certified. I also hereby affirm that I have read and understand the form instructions set forth in Part 1 of this DBE Form B.

The undersigned Prime Contractor hereby certifies and agrees that it has fully complied with the State Minority Business Enterprise law, State Finance and Procurement Article §14-308(a)(2), Annotated Code of Maryland which provides that, except as otherwise provided by law, a contractor may not identify a certified minority business enterprise in a bid or proposal and:

- (1) fail to request, receive, or otherwise obtain authorization from the certified minority business enterprise to identify the certified minority business enterprise in its bid or proposal;
- (2) fail to notify the certified minority business enterprise before execution of the contract of its inclusion of the bid or proposal;
- (3) fail to use the certified minority business enterprise in the performance of the contract; or
- (4) pay the certified minority business enterprise solely for the use of its name in the bid or proposal.

I solemnly affirm under the penalties of perjury that the contents of Parts 2 and 3 of MDOT DBE Form B are true to the best of my knowledge, information and belief.

Company Name

Signature of Representative

Address

Printed Name and Title

City, State and Zip Code

Date



MDOT MBE/DBE FORM E
GOOD FAITH EFFORTS GUIDANCE AND DOCUMENTATION

**PART 1 – GUIDANCE FOR DEMONSTRATING GOOD FAITH EFFORTS
TO MEET MBE/DBE PARTICIPATION GOALS**

In order to show that it has made good faith efforts to meet the Minority Business Enterprise (MBE)/Disadvantaged Business Enterprise (DBE) participation goal (including any MBE subgoals) on a contract, the bidder/offeror must either (1) meet the MBE/DBE Goal(s) and document its commitments for participation of MBE/DBE Firms, or (2) when it does not meet the MBE/DBE Goal(s), document its Good Faith Efforts to meet the goal(s).

I. Definitions

MBE/DBE Goal(s) – “MBE/DBE Goal(s)” refers to the MBE participation goal and MBE participation subgoal(s) on a State-funded procurement and the DBE participation goal on a federally-funded procurement.

Good Faith Efforts – The “Good Faith Efforts” requirement means that when requesting a waiver, the bidder/offeror must demonstrate that it took all necessary and reasonable steps to achieve the MBE/DBE Goal(s), which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient MBE/DBE participation, even if those steps were not fully successful. Whether a bidder/offeror that requests a waiver made adequate good faith efforts will be determined by considering the quality, quantity, and intensity of the different kinds of efforts that the bidder/offeror has made. The efforts employed by the bidder/offeror should be those that one could reasonably expect a bidder/offeror to take if the bidder/offeror were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere *pro forma* efforts are not good faith efforts to meet the DBE contract requirements. The determination concerning the sufficiency of the bidder's/offeror's good faith efforts is a judgment call; meeting quantitative formulas is not required.

Identified Firms – “Identified Firms” means a list of the DBEs identified by the procuring agency during the goal setting process and listed in the federally-funded procurement as available to perform the Identified Items of Work. It also may include additional DBEs identified by the bidder/offeror as available to perform the Identified Items of Work, such as DBEs certified or granted an expansion of services after the procurement was issued. If the procurement does not include a list of Identified Firms or is a State-funded procurement, this term refers to all of the MBE Firms (if State-funded) or DBE Firms (if federally-funded) the bidder/offeror identified as available to perform the Identified Items of Work and should include all appropriately certified firms that are reasonably identifiable.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
29 of 45

Identified Items of Work – “Identified Items of Work” means the bid items identified by the procuring agency during the goal setting process and listed in the procurement as possible items of work for performance by MBE/DBE Firms. It also may include additional portions of items of work the bidder/offeror identified for performance by MBE/DBE Firms to increase the likelihood that the MBE/DBE Goal(s) will be achieved. If the procurement does not include a list of Identified Items of Work, this term refers to all of the items of work the bidder/offeror identified as possible items of work for performance by MBE/DBE Firms and should include all reasonably identifiable work opportunities.

MBE/DBE Firms – For State-funded contracts, “MBE/DBE Firms” refers to certified **MBE** Firms. Certified MBE Firms can participate in the State’s MBE Program. For federally-funded contracts, “MBE/DBE Firms” refers to certified **DBE** Firms. Certified DBE Firms can participate in the federal DBE Program.



II. Types of Actions MDOT will Consider

The bidder/offeror is responsible for making relevant portions of the work available to MBE/DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/DBE subcontractors and suppliers, so as to facilitate MBE/DBE participation. The following is a list of types of actions MDOT will consider as part of the bidder's/offeror's Good Faith Efforts when the bidder/offeror fails to meet the MBE/DBE Goal(s). This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Bid Items as Work for MBE/DBE Firms

1. Identified Items of Work in Procurements

(a) Certain procurements will include a list of bid items identified during the goal setting process as possible work for performance by MBE/DBE Firms. If the procurement provides a list of Identified Items of Work, the bidder/offeror shall make all reasonable efforts to solicit quotes from MBE Firms or DBE Firms, whichever is appropriate, to perform that work.

(b) Bidders/Offerors may, and are encouraged to, select additional items of work to be performed by MBE/DBE Firms to increase the likelihood that the MBEDBE Goal(s) will be achieved.

2. Identified Items of Work by Bidders/Offerors

(a) When the procurement does not include a list of Identified Items of Work, bidders/offerors should reasonably identify sufficient items of work to be performed by MBE/DBE Firms.

(b) Where appropriate, bidders/offerors should break out contract work items into economically feasible units to facilitate MBE/DBE participation, rather than perform these work items with their own forces. The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder/offeror of the responsibility to make Good Faith Efforts.

B. Identify MBE Firms or DBE Firms to Solicit

1. DBE Firms Identified in Procurements

(a) Certain procurements will include a list of the DBE Firms identified during the goal setting process as available to perform the items of work. If the procurement provides



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
31 of 45

a list of Identified DBE Firms, the bidder/offeror shall make all reasonable efforts to solicit those DBE firms.

(b) Bidders/offerors may, and are encouraged to, search the MBE/DBE Directory to identify additional DBEs who may be available to perform the items of work, such as DBEs certified or granted an expansion of services after the solicitation was issued.

2. MBE/DBE Firms Identified by Bidders/Offerors

(a) When the procurement does not include a list of Identified MBE/DBE Firms, bidders/offerors should reasonably identify the MBE Firms or DBE Firms, whichever is appropriate, that are available to perform the Identified Items of Work.

(b) Any MBE/DBE Firms identified as available by the bidder/offeror should be certified in the appropriate program (MBE for State-funded procurements or DBE for federally-funded procurements)

(c) Any MBE/DBE Firms identified as available by the bidder/offeror should be certified to perform the Identified Items of Work.

C. Solicit MBE/DBEs

1. Solicit all Identified Firms for all Identified Items of Work by providing written notice. The bidder/offeror should:

(a) provide the written solicitation at least 10 days prior to bid opening to allow sufficient time for the MBE/DBE Firms to respond;

(b) send the written solicitation by first-class mail, facsimile, or email using contact information in the MBE/DBE Directory, unless the bidder/offeror has a valid basis for using different contact information; and

(c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the MBE/DBE, and other requirements of the contract to assist MBE/DBE Firms in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. “All” Identified Firms includes the DBEs listed in the procurement and any MBE/DBE Firms you identify as potentially available to perform the Identified Items of Work, but it does not include MBE/DBE Firms who are no longer certified to perform the work as of the date the bidder/offeror provides written solicitations.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
32 of 45

3. “Electronic Means” includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested MBE/DBE cannot access the information provided by electronic means, the bidder/offeror must make the information available in a manner that is accessible by the interested MBE/DBE.

4. Follow up on initial written solicitations by contacting DBEs to determine if they are interested. The follow up contact may be made:

(a) by telephone using the contact information in the MBE/DBE Directory, unless the bidder/offeror has a valid basis for using different contact information; or

(b) in writing *via* a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, use all other reasonable and available means to solicit the interest of MBE/DBE Firms certified to perform the work of the contract. Examples of other means include:

(a) attending any pre-bid meetings at which MBE/DBE Firms could be informed of contracting and subcontracting opportunities;

(b) if recommended by the procurement, advertising with or effectively using the services of at least two minority focused entities or media, including trade associations, minority/women community organizations, minority/women contractors' groups, and local, state, and federal minority/women business assistance offices listed on the MDOT Office of Minority Business Enterprise website; and

(c) effectively using the services of other organizations, as allowed on a case-by-case basis and authorized in the procurement, to provide assistance in the recruitment and placement of MBE/DBE Firms.

D. Negotiate With Interested MBE/DBE Firms

Bidders/Offerors must negotiate in good faith with interested MBE/DBE Firms.

1. Evidence of negotiation includes, without limitation, the following:

(a) the names, addresses, and telephone numbers of MBE/DBE Firms that were considered;

(b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
33 of 45

(c) evidence as to why additional agreements could not be reached for MBE/DBE Firms to perform the work.

2. A bidder/offeror using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.

3. The fact that there may be some additional costs involved in finding and using MBE/DBE Firms is not in itself sufficient reason for a bidder's/offeror's failure to meet the contract DBE goal, as long as such costs are reasonable. Factors to take into consideration when determining whether a MBE/DBE Firm's quote is excessive or unreasonable include, without limitation, the following:

- (a) the dollar difference between the MBE/DBE subcontractor's quote and the average of the other subcontractors' quotes received by the bidder/offeror;
- (b) the percentage difference between the MBE/DBE subcontractor's quote and the average of the other subcontractors' quotes received by the bidder/offeror;
- (c) the percentage that the DBE subcontractor's quote represents of the overall contract amount;
- (d) the number of MBE/DBE firms that the bidder/offeror solicited for that portion of the work;
- (e) whether the work described in the MBE/DBE and Non-MBE/DBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and
- (f) the number of quotes received by the bidder/offeror for that portion of the work.

4. The above factors are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.

5. The bidder/offeror may not use its price for self-performing work as a basis for rejecting a MBE/DBE Firm's quote as excessive or unreasonable.

6. The "average of the other subcontractors' quotes received by the" bidder/offeror refers to the average of the quotes received from all subcontractors, except that there should be quotes from at least three subcontractors, and there must be at least one quote from a MBE/DBE and one quote from a Non-MBE/DBE.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
34 of 45

7. A bidder/offeror shall not reject a MBE/DBE Firm as unqualified without sound reasons based on a thorough investigation of the firm's capabilities. For each certified MBE/DBE that is rejected as unqualified or that placed a subcontract quotation or offer that the bidder/offeror concludes is not acceptable, the bidder/offeror must provide a written detailed statement listing the reasons for this conclusion. The bidder/offeror also must document the steps taken to verify the capabilities of the MBE/DBE and Non-MBE/DBE Firms quoting similar work.

(a) The factors to take into consideration when assessing the capabilities of a MBE/DBE Firm, include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.

(b) The MBE/DBE Firm's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the efforts to meet the project goal.

E. Assisting Interested MBE/DBE Firms

When appropriate under the circumstances, the decision-maker will consider whether the bidder/offeror:

1. made reasonable efforts to assist interested MBE/DBE Firms in obtaining the bonding, lines of credit, or insurance required by MDOT or the bidder/offeror; and
2. made reasonable efforts to assist interested MBE/DBE Firms in obtaining necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts the decision-maker may consider engineering estimates, catalogue prices, general market availability and availability of certified MBE/DBE Firms in the area in which the work is to be performed, other bids or offers and subcontract bids or offers substantiating significant variances between certified MBE/DBE and Non-MBE/DBE costs of participation, and their impact on the overall cost of the contract to the State and any other relevant factors.

The decision-maker may take into account whether a bidder/offeror decided to self-perform subcontract work with its own forces, especially where the self-performed work is Identified Items of Work in the procurement. The decision-maker also may take into account the



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
35 of 45

performance of other bidders/offerors in meeting the contract. For example, when the apparent successful bidder/offeror fails to meet the contract goal, but others meet it, this reasonably raises the question of whether, with additional reasonable efforts, the apparent successful bidder/offeror could have met the goal. If the apparent successful bidder/offeror fails to meet the goal, but meets or exceeds the average MBE/DBE participation obtained by other bidders/offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful bidder/offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, a bidder/offeror seeking a waiver of the MBE/DBE Goal(s) or a portion thereof must provide written documentation of its Good Faith Efforts, in accordance with COMAR 21.11.03.11, within 10 business days after receiving notice that it is the apparent awardee. The written documentation shall include the following:

A. Items of Work (Complete Good Faith Efforts Documentation Form E, Part 2)

A detailed statement of the efforts made to select portions of the work proposed to be performed by certified MBE/DBE Firms in order to increase the likelihood of achieving the stated MBE/DBE Goal(s).

B. Outreach/Solicitation/Negotiation

1. The record of the bidder's/offeror's compliance with the outreach efforts prescribed by COMAR 21.11.03.09C(2)(a) through (e) and 49 C.F.R. Part 26, Appendix A. **(Complete Outreach Efforts Compliance Statement)**

2. A detailed statement of the efforts made to contact and negotiate with MBE/DBE Firms including:

(a) the names, addresses, and telephone numbers of the MBE/DBE Firms who were contacted, with the dates and manner of contacts (letter, fax, email, telephone, etc.) **(Complete Good Faith Efforts Form E, Part 3, and submit letters, fax cover sheets, emails, etc. documenting solicitations);** and

(b) a description of the information provided to MBE/DBE Firms regarding the plans, specifications, and anticipated time schedule for portions of the work to be performed and the means used to provide that information.

C. Rejected MBE/DBE Firms (Complete Good Faith Efforts Form E, Part 4)



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
36 of 45

1. For each MBE/DBE Firm that the bidder/offeror concludes is not acceptable or qualified, a detailed statement of the reasons for the bidder's/offeror's conclusion, including the steps taken to verify the capabilities of the MBE/DBE and Non-MBE/DBE Firms quoting similar work.

2. For each certified MBE/DBE Firm that the bidder/offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the bidder's/offeror's conclusion, including the quotes received from all MBE/DBE and Non-MBE/DBE firms bidding on the same or comparable work. **(Include copies of all quotes received.)**

3. A list of MBE/DBE Firms contacted but found to be unavailable. This list should be accompanied by a Minority Contractor Unavailability Certificate signed by the MBE/DBE contractor or a statement from the bidder/offeror that the MBE/DBE contractor refused to sign the Minority Contractor Unavailability Certificate.

D. Other Documentation

1. Submit any other documentation requested by the Procurement Officer to ascertain the bidder's/offeror's Good Faith Efforts.

2. Submit any other documentation the bidder/offeror believes will help the Procurement Officer ascertain its Good Faith Efforts.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
37 of 45

**MDOT MBE/DBE FORM E
GOOD FAITH EFFORTS GUIDANCE AND DOCUMENTATION**

PART 2 – CERTIFICATION REGARDING GOOD FAITH EFFORTS DOCUMENTATION

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

PARTS 3, 4, AND 5 MUST BE INCLUDED WITH THIS CERTIFICATE ALONG WITH ALL DOCUMENTS SUPPORTING YOUR WAIVER REQUEST.

I hereby request a waiver of (1) the Minority Business Enterprise (MBE) participation goal and/or subgoal(s), (2) the Disadvantaged Business Enterprise (DBE) participation goal, or (3) a portion of the pertinent MBE/DBE participation goal and/or MBE subgoal(s) for this procurement.¹ I affirm that I have reviewed the Good Faith Efforts Guidance MBE/DBE Form E. I further affirm under penalties of perjury that the contents of Parts 3, 4, and 5 of MDOT MBE/DBE Form E are true to the best of my knowledge, information and belief.

Company Name

Signature of Representative

Address

Printed Name and Title

City, State and Zip Code

Date

¹ MBE participation goals and subgoals apply to State-funded procurements. DBE participation goals apply to federally-funded procurements. Federally-funded contracts do not have subgoals.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E

MDOT MBE/DBE FORM E
GOOD FAITH EFFORTS GUIDANCE AND DOCUMENTATION

**PART 3 – IDENTIFIED ITEMS OF WORK BIDDER/OFFEROR MADE AVAILABLE TO
MBE/DBE FIRMS**

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

Identify those items of work that the bidder/offeror made available to MBE/DBE Firms. This includes, where appropriate, those items the bidder/offeror identified and determined to subdivide into economically feasible units to facilitate the MBE/DBE participation. For each item listed, show the anticipated percentage of the total contract amount. It is the bidder's/offeror's responsibility to demonstrate that sufficient work to meet the goal was made available to MBE/DBE Firms, and the total percentage of the items of work identified for MBE/DBE participation equals or exceeds the percentage MBE/DBE goal set for the procurement. Note: If the procurement includes a list of bid items identified during the goal setting process as possible items of work for performance by MBE/DBE Firms, the bidder/offeror should make all of those items of work available to MBE/DBE Firms or explain why that item was not made available. If the bidder/offeror selects additional items of work to make available to MBE/DBE Firms, those additional items should also be included below.

Identified Items of Work	Was this work listed in the procurement?	Does bidder/offeror normally self-perform this work?	Was this work made available to MBE/DBE Firms? If no, explain why?
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Please check if Additional Sheets are attached.



MDOT MBE/DBE FORM E
GOOD FAITH EFFORTS GUIDANCE AND DOCUMENTATION

PART 4 – IDENTIFIED MBE/DBE FIRMS AND RECORD OF SOLICITATIONS

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

Identify the MBE/DBE Firms solicited to provide quotes for the Identified Items of Work made available for MBE/DBE participation. Include the name of the MBE/DBE Firm solicited, items of work for which bids/quotes were solicited, date and manner of initial and follow-up solicitations, whether the MBE/DBE provided a quote, and whether the MBE/DBE is being used to meet the MBE/DBE participation goal. MBE/DBE Firms used to meet the participation goal must be included on the MBE/DBE Participation Schedule, Form B. Note: If the procurement includes a list of the MBE/DBE Firms identified during the goal setting process as potentially available to perform the items of work, the bidder/offeror should solicit all of those MBE/DBE Firms or explain why a specific MBE/DBE was not solicited. If the bidder/offeror identifies additional MBE/DBE Firms who may be available to perform Identified Items of Work, those additional MBE/DBE Firms should also be included below. Copies of all written solicitations and documentation of follow-up calls to MBE/DBE Firms must be attached to this form. If the bidder/offeror used a Non-MBE/DBE or is self-performing the identified items of work, Part 4 must be completed.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
40 of 45

Name of Identified MBE/DBE Firm & MBE Classification	Describe Item of Work Solicited	Initial Solicitation Date & Method	Follow-up Solicitation Date & Method	Details for Follow-up Calls	Quote Rec'd	Quote Used	Reason Quote Rejected
<p>Firm Name: _____</p> <p>MBE Classification (Check only if requesting waiver of MBE subgoal.)</p> <p><input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American-Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other MBE Classification</p> <p>_____</p> <p>—</p>		<p>Date:</p> <p><input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> Email</p>	<p>Date:</p> <p><input type="checkbox"/> Phone <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> Email</p>	<p>Time of Call:</p> <p>Spoke With:</p> <p><input type="checkbox"/> Left Message</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Used Other MBE/DBE <input type="checkbox"/> Used Non-MBE/DBE <input type="checkbox"/> Self-performing</p>
<p>Firm Name: _____</p> <p>MBE Classification (Check only if requesting waiver of MBE subgoal.)</p> <p><input type="checkbox"/> African American-Owned <input type="checkbox"/> Hispanic American-Owned <input type="checkbox"/> Asian American-Owned <input type="checkbox"/> Women-Owned <input type="checkbox"/> Other MBE Classification</p> <p>_____</p> <p>—</p>		<p>Date:</p> <p><input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> Email</p>	<p>Date:</p> <p><input type="checkbox"/> Phone <input type="checkbox"/> Mail <input type="checkbox"/> Facsimile <input type="checkbox"/> Email</p>	<p>Time of Call:</p> <p>Spoke With:</p> <p><input type="checkbox"/> Left Message</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p><input type="checkbox"/> Used Other MBE/DBE <input type="checkbox"/> Used Non-MBE/DBE <input type="checkbox"/> Self-performing</p>

Please check if Additional Sheets are attached.



MDOT MBE/DBE FORM E
GOOD FAITH EFFORTS GUIDANCE AND DOCUMENTATION

PART 5 – ADDITIONAL INFORMATION REGARDING REJECTED MBE/DBE QUOTES

PAGE __ OF __

Prime Contractor	Project Description	Solicitation Number

This form must be completed if Part 3 indicates that a MBE/DBE quote was rejected because the bidder/offeree is using a Non-MBE/DBE or is self-performing the Identified Items of Work. Provide the Identified Items Work, indicate whether the work will be self-performed or performed by a Non-MBE/DBE, and if applicable, state the name of the Non-MBE/DBE. Also include the names of all MBE/DBE and Non-MBE/DBE Firms that provided a quote and the amount of each quote.

Describe Identified Items of Work Not Being Performed by MBE/DBE (Include spec/section number from bid)	Self-performing or Using Non-MBE/DBE (Provide name)	Amount of Non-MBE/DBE Quote	Name of Other Firms who Provided Quotes & Whether MBE/DBE or Non-MBE/DBE	Amount Quoted	Indicate Reason Why MBE/DBE Quote Rejected & Briefly Explain
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE/DBE	\$ _____	_____ <input type="checkbox"/> MBE/DBE <input type="checkbox"/> Non-MBE/DBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE/DBE	\$ _____	_____ <input type="checkbox"/> MBE/DBE <input type="checkbox"/> Non-MBE/DBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other
	<input type="checkbox"/> Self-performing <input type="checkbox"/> Using Non-MBE/DBE	\$ _____	_____ <input type="checkbox"/> MBE/DBE <input type="checkbox"/> Non-MBE/DBE	\$ _____	<input type="checkbox"/> Price <input type="checkbox"/> Capabilities <input type="checkbox"/> Other

Please check if Additional Sheets are attached.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
42 of 45

INFORMATION REQUIRED TO BE SUBMITTED FOR FEDERALLY ASSISTED CONTRACTS:

(a) Each bidder shall provide the following information:

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ >\$10,000,000

(b) Each bidder shall provide the following information for each firm quoting or considered as subcontractors and/or suppliers:

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ > \$10,000,000

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ > \$10,000,000



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
43 of 45

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ > \$10,000,000

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ > \$10,000,000

NAME OF FIRM: _____

Street and/or P.O. Box

City State Zip Code

____ DBE ____ Non-DBE Age of the firm ____ years
Annual gross receipts per last calendar year ____ <\$500,000 ____ \$500,000-1,000,000
____ \$1,000,000-3,000,000 ____ \$3,000,000-5,000,000 ____ \$5,000,000-10,000,000
____ > \$10,000,000

Submit additional copies of this page as page 43A of 45, 43B of 45, etc. as necessary, and place them as the last pages in the Invitation for Bids. Place an "X" for "NO" on the last copy. Any additional Copies: _____ NO _____ YES



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
44 of 45

EXTRA WORK, CONTRACT TIME, BONDING, LIQUIDATED DAMAGES, AND PROPOSAL GUARANTY

EXTRA WORK. It is further proposed to do all "Extra Work" which may be required to complete the work contemplated at unit prices or lump sum prices to be agreed upon in writing prior to starting such extra work, or if such prices or sums cannot be agreed upon, to perform such work on a Force Account basis as specified in TC-7.03.

CONTRACT TIME. To commence work as specified in the "Notice to Proceed" and to prosecute the work to complete the contract within/or before

330 (working days)

Any delay in awarding or the execution of this contract will not be considered as a basis for any monetary claim, however, an extension of time may be considered by the Administration, if warranted.

BONDING. When the Contractor's bid is \$100,000 or more, the Contractor shall furnish a Payment Bond and a Performance Bond in the full amount of the Contract Award as security for the construction and completion of the contract in conformance with the Plans, Standard Specifications, revisions thereto, General Provisions and Special Provisions.

To guarantee all of the work performed under this contract to be done in conformance with the Standard Specifications, revisions thereto, General Provisions and Special Provisions in a good workmanlike manner and to renew or repair any work which may be rejected due to defective materials or workmanship, prior to final completion and acceptance of the work, also we have the equipment, labor, supervision and financial capacity to perform this contract either with our organization or with Subcontractors.

LIQUIDATED DAMAGES. The Contractor is hereby advised that liquidated damages in the

amount of One Thousand One Hundred dollars (\$1,100.00) per calendar day

will be assessed for unauthorized extensions beyond the contracted time of completion.



CONTRACT PROVISIONS
PROPOSAL FORM PACKET —

CONTRACT NO. IFB_ContractNo
FAP No. STP-3(434)E
45 of 45

PROPOSAL GUARANTY. A bid security is not required on Contract Proposals under \$100,000.

A bid security totaling at least five percent (5%) of the bid amount will be required on contracts of \$100,000 or over.

Acceptable forms of security for bid guaranty shall be:

- (1) A bond in a form satisfactory to the State underwritten by a company licensed to issue bonds in this State;
- (2) A bank certified check, bank cashier's check, bank treasurer's check, or cash;
- (3) Pledge of security backed by the full faith and full credit of the United States government or bonds issued by the State of Maryland.

Enclosed herewith, find bid security based on at least five percent (5%) of the aggregate amount of the bid submitted, and made payable to the "Town of Denton". This bid security is a Proposal Guarantee (which is understood will be forfeited in the event the contract is not executed, if awarded to the signer of this affidavit).

PROJECT DESCRIPTION

This project, Wharves at Choptank Crossing, located in the Town of Denton in Caroline County, is for the construction of a new visitor's center and the associated site improvements within Crouse Park.

The work will consist of the following:

- (a) Erosion and Sediment Control.
- (b) Grinding, resurfacing, and full depth hot mix asphalt pavement.
- (c) Signing and Pavement Markings.
- (d) Combination Concrete Curb and Gutter.
- (e) Utilities.
- (f) Site Lighting.
- (g) Stormwater Management.
- (h) Drainage.
- (i) Concrete Sidewalks and Detectable Warning Surfaces on ADA Compliant Ramps.
- (j) Landscaping (topsoil, seeding, and plantings).
- (k) Construction of the building that includes wooden piles, chairlift, HVAC, bathrooms, water and sewer lines.

SPECIFICATIONS

All work on this project shall conform to the Maryland Department of Transportation, State Highway Administration's Specifications entitled, "Standard Specifications for Construction and Materials" dated July 2008 revisions thereof, or additions thereto, and the Special Provisions included in this Invitation for Bids.

NOTE: All references to contained herein to the State of Maryland, Department of Transportation, Administration or Engineer shall be construed to mean the Town of Denton as applicable.

SPECIAL PROVISIONS
PROJECT DESCRIPTION

CONTRACT NO. CO4125125
2 of 2

EMPLOYMENT AGENCY

Caroline County
Caroline County One Stop Career Center
P.O. Box 400
300 Market Street, Suite 201
Denton, MD 21629
Telephone (410) 819-4549
Fax (410) 819-4503
denton@dllr.state.md.us

NOTICE TO CONTRACTOR

PROJECT SCHEDULE. Section 109 shall only apply when a CPM Project Schedule item is included in the Schedule of Prices. Otherwise, all Project Schedules shall conform to Section 110.

NOTICE TO BIDDERS. The Proposal Form Packet in this Invitation for Bids requires the following information be submitted for the Bidder and each firm quoting or considered as subcontractors:

- (a) Name of firm.
- (b) Address of firm.
- (c) MBE, Non-MBE, DBE, or Non-DBE.
- (d) Age of firm.
- (e) Annual gross receipts per last calendar year.

Note that there are provisions for submitting copies for additional subcontractors, and that an “X” is required to indicate whether or not additional copies have been submitted.

AFFIRMATIVE ACTION PLAN (AAP) CONTRACT GOALS. In order to be in compliance with the revised MBE/DBE laws effective September 27, 2011 the bidder is required to complete the AAP information on pages 19, 20, 24–27, and 37-41 of 45 of the Contract Provisions, Proposal Form Packet —Federal, or complete the AAP information on pages 14, 15, 19-22, and 32-36 of 41 of the Contract Provisions, Proposal Form Packet—State, or complete the AAP information on pages 15, 16, 20-23 and 33-37 of 42 of the Contract Provisions, Proposal Form Packet—State Small Business Reserve Procurement. Failure to complete the information may be grounds for the bid to be declared non-responsive.

BOOK OF STANDARDS. The Book of Standards for Highway and Incidental Structures is now available only on the Administration’s Internet Site at www.roads.maryland.gov. The Book of Standards can be located by clicking on Business with SHA; Business Standards and Specifications; and Book of Standards for Highway and Incidental Structures. Hard copies of the Book of Standards will no longer be sold in the Cashiers Office and hard copy distributions of the Standard updates will no longer be made.

BRIDGE UNDERCLEARANCE. The minimum underclearances shall be maintained whenever resurfacing a roadway. This may require grinding the existing pavement prior to placing the resurfacing material. Immediately after completing the resurfacing operation and when the lane closures are still in the effect, the Contractor, in the presence of the Engineer, shall measure the minimum vertical underclearance. The Engineer will submit results to the Office of Structures. The cost of these measurements will be incidental to other pertinent items specified in the Contract Documents.

REQUEST FOR INFORMATION. Any information regarding the requirements or the interpretation of any provision of the Contract Documents shall be requested, in writing, and delivered prior to the scheduled date of bid opening. Responses to questions or inquiries having any material effect on the bids shall be made by written addenda sent to all prospective bidders.

SPECIAL PROVISIONS
NOTICE TO CONTRACTOR

CONTRACT NO. CO4125125
2 of 2

The Administration will not respond to telephone requests for information concerning this invitation for bids that would materially affect the bid.

Written requests for information or questions shall be addressed to:

Mr. Donald H. Mulrine, Jr.
Town Administrator
4 North 2nd Street
Denton, MD 21629

or
FAX to 410-479-3534

Each request for information or questions shall include the Contract number and the name and address of the originator.

RIGHT-OF-WAY STATUS - There is no right-of-way required for this project. A permit has been granted (SHA permit 2-CO-2761-13) to permit the temporary placement and storage of materials and equipment under SHA bridge #0501600 MD 404 Business over the Choptank River, for the duration of this project.

The Town of Denton possesses all right-of-way and rights of way including but not limited to all easements and permits, required to construct and maintain the project.

REQUIRED PERMITS – The following permits are required for this project.

1. Erosion & Sediment Control;
2. Stormwater Management;
3. Wetland Disturbance; and,
4. Tree Permit.

It is anticipated that all permits will be acquired prior to the bid opening date.

NOTICE TO CONTRACTOR

EARLY SUBMISSIONS. The last sentence of the first paragraph of TC-5.02, “No work shall be started before receipt of the Notice to Proceed” shall not apply to the following:

After notification to the Contractor from the Administration that the Contractor is the apparent low bidder, the Contractor will be permitted to provide a written request to the Engineer to submit documentation for materials sources and working drawings for any items of work that have a long lead time and could jeopardize the project schedule. Upon written approval from the Engineer the Contractor may submit the applicable documentation to the Engineer.

Should the Contract not be awarded to the apparent low bidder who meets the requirements of the Contract, GP-8.10 will apply for all costs accrued for the preparation and approval of the working drawings and any resultant material purchase approved by the District Engineer and steel fabricated in conformance with the approved working drawings between the date the Contractor received notice of apparent low bidder and the date of notice that the apparent low bidder will not be awarded this Contract.

Should this Contract not be awarded to the apparent low bidder due to failure of the Contractor to comply with all award and execution requirements, all costs accrued for the preparation of the specific items and any resultant material purchased and steel fabrication shall be borne by the Contractor.

Failure of the Contractor to submit the early submissions will not be basis for delaying issuance of the Notice to Proceed or be considered a reason for a time extension.

SECTION 875 UTILITIES STATEMENT

DESCRIPTION. The Contractor's attention is called to the requirements of Sections GP-5.05, GP-7.13 and GP-7.17.

MATERIALS. Not Applicable.

CONSTRUCTION.

- (a) Attention of the Contractor is directed to the presence of water, sewer, gas mains, electrical wires, conduit, communications cables (both overhead and underground), poles and house service connections in the street or highway in which the construction project is to be performed. The Contractor shall exercise special care and extreme caution to protect and avoid damage to utility company facilities as described in the preceding sentence. The Contractor shall take into consideration the adjustments and installations by public utilities in areas within the limits of this Contract. All notifications to the utility companies and "MISS UTILITY" shall be, at least, 48 hours (two full working days) in advance of working in the area of the specific affected utility. The notification to "MISS UTILITY" is required by the Contractor whenever any excavating or similar work is to be performed. **The State Highway Administration (SHA) is now part of Miss Utility. Please note our new notification procedures.** To file electronically, visit – <http://www.missutility.net.itics/>. This site has instructions for MISS UTILITY requests, including Registration and Processing a Locate Request. When processing on line, you shall complete the LOCATE REQUEST FORM. ON THIS FORM, TOWARD THE BOTTOM IS Section – EXCAVATION INFORMATION. Under this Section, in the blank space to the right of "Work Being Done For" type – . This is so MISS UTILITY knows what highway agency and district number (2) you are working for. Similarly, when notifying MISS UTILITY, via 1.800.441.8355 (Kent, Queen Anne's, Talbot & Caroline) or 1.800.257-7777 (Cecil), you must state, " ." This provision is required whether the contractor contacts Miss Utility via the internet or by phone. Failure of the contractor to comply with this requirement may result in a locate fee by SHA for which the contractor will not be allowed to recover. The Contractor must also notify the SHA to locate and mark all SHA owned facilities – Street Lights, Sign Lights, SHA Traffic Signals, Fiber Optic Cables, Communication Cables and Intelligent Transportation System (ITS) devices. [For SHA owned facilities, see last contact(s) listed under (d).]
- (b) The Contractor shall locate all existing utilities and be responsible for their safety. Should any existing utilities be damaged or destroyed due to the operations of the Contractor, the damaged or destroyed components shall be immediately 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 Administration or the owner of the utility.

- (c) The existing utilities requiring relocation or adjustment shall be relocated or adjusted by the agency responsible for their maintenance or by the owner of the utility unless otherwise indicated in the Contract Documents. The Contractor shall inform the respective utility companies at least five days prior to working in any area. In addition, the Contractor shall give sufficient notice to the specific utilities of the Contractor's overall plan for construction. The utility companies will establish the lead time necessary to meet the applicable utility work schedule and coordinate with the Contractor's work operations based upon the Contractor's overall plan.
- (d) The following known utility companies own or maintain facilities within the limits of this project for which no relocation or adjustments are anticipated:

1. Verizon Communications

Verizon Communications maintains both aerial and buried facilities within the limits of this project.

Notify: Ms. Penny Gamble
Verizon Communications
251 Ritchie Lane, 2nd Floor
Glen Burnie, MD 21061
(410) 768-1357
Notify: "Miss Utility" 1-800-441-8355

2. Delmarva Power

Delmarva Power maintains aerial and buried electric facilities within the limits of this project.

Notify: Mr. Glenn Ankenbrand
Delmarva Power
P.O. Box 159
Centreville, MD 21617
(410) 758-4101
Notify: "Miss Utility" 1-800-441-8355

3. Comcast Cable

Comcast Cable maintains buried cable facilities within the limits of this project.

Notify: Mr. Scott Vosbury
Comcast Cable
Construction Supervisor
Salisbury, MD 21801
(302) 841-6315

Notify: "Miss Utility" 1-800-441-8355

4. Town of Denton

Town of Denton maintains water and sanitary sewer facilities within the limits of this project.

Notify: Mr. Donald Mulrine
4 North 2nd Street
Denton, MD 21629
(410) 479-2050

Notify: "Miss Utility" 1-800-441-8355

5. State High Administration

The SHA maintains highway lighting within the limits of this project.

Notify: Mr. Richard Crew
State Highway Administration District 2
615 Morgnec RD
Chestertown, MD 21620
(410) 778-3061/1-800-637-9740

Notify: "Miss Utility" 1-800-441-8355

- (e) All notifications to the above utility companies and "**MISS UTILITY**", at **1-800-441-8355** shall be given 48 hours (two full working days) in advance of working in the area of the specific affected utility. The notification to "**MISS UTILITY**" is required whenever any excavating or similar work is to be performed.
- (f) If an adjustment is required to facilities, it is necessary that the existing facilities remain in service until the new construction is complete and placed in service. Also, when adjustments are required, establishment of lead times are necessary to meet the applicable utility schedule and coordination with the Contractor's work operation.
- (g) This section applies to projects partially or totally funded with Federal Funds. The prime contractor or its subcontractors shall comply with Section 165 of the Surface Transportation Assistance Act of 1982 as amended by Section 1041(a) and 1048(a) of the Intermodal Surface Transportation Efficiency Act of 1991 with regard to the furnishing and coating of iron and steel products.

The prime contractor or its subcontractors shall supply certifications to the Project Engineer from the manufacturer of all coating, iron or steel products which document that the steel and iron have been manufactured and the coatings for iron or steel have been applied by the manufacturer in the United States. The Project Engineer shall forward copies of the certifications to the Office of Materials Technology for review and approval prior to such items being incorporated into the permanent work. Certifications shall extend to materials utilized in manufactured and fabricated products purchased by the Contractor.

Products manufactured of foreign steel or iron materials may be used, provided the cost of such products as they are delivered to the project does not exceed 0.1% of the total contract amount, or \$2,500.00, whichever is greater. If a supplier or fabricator wishes to use a partial fabrication process where domestic and foreign source components are assembled at a domestic location, the "as delivered cost" of the foreign components should include any transportation, assembly and testing costs required to install them in the final product. This applies to all iron, steel and coating materials used for utility work incorporated into the project including materials/items supplied by the Utility Company.

MEASUREMENT AND PAYMENT. Working around or protecting the utilities, removal of temporary materials from the adjusted utilities prior to placement of the proposed hot mix asphalt, and cooperation with the owners of the utilities and with other contractors will not be measured for payment and the cost will be incidental to the items specified in the Contract Documents.

TERMS AND CONDITIONS

TC SECTION 4
CONTROL OF WORK

TC-4.02 FAILURE TO MAINTAIN PROJECT

98 **ADD:** As a third paragraph.

Additionally, an appropriate deduction will be made from the Contractor's next progress estimate for each day or portion thereof that Maintenance of Traffic deficiencies exist, and will continue until the deficiencies are satisfactorily corrected and accepted by the Engineer. Any portion of a day will be assessed a full day deduction. The deduction will be equal to a prorata share of the lump sum price bid for Maintenance of Traffic or an amount prorated from the Engineer's estimate, whichever is more. The amount prorated will be the per diem amount established by using the working days (based upon calendar dates when required) divided into the total value of the bid item or the Engineer's estimate of that item, whichever is more.

The above noted deduction will be assessed on the next progress estimate if:

The Contractor does not take action to correct the deficiencies and properly assume the responsibilities of maintaining the project (as determined by the Engineer) within four hours of receiving a notice to comply with the required maintenance provisions.

The deduction will be equal to the daily prorated share of the lump sum price bid for Maintenance of Traffic for each day or portion thereof that the deficiencies exist, and will continue until the deficiencies and proper assumption of the required maintenance provisions are satisfactorily corrected and accepted by the Engineer. The amount of monies deducted will be a permanent deduction and are not recoverable. Upon satisfactory correction of the deficiencies, payment of the Maintenance of Traffic lump sum item will resume.



TERMS AND CONDITIONS

**TC SECTION 6
RESTRICTIONS AND PERMITS**

112 **DELETE:** TC 6.10 – RECYCLED OR REHANDLED MATERIAL in its entirety.

INSERT: The following.

TC 6.10 – RECYCLED OR REHANDLED MATERIAL.

Refer to 900.03 in the Contract Documents.



TERMS AND CONDITIONS

**TC SECTION 6
RESTRICTIONS AND PERMITS**

**TC-6.12 — STRUCTURE UNDERCLEARANCES AND
OVERHEAD CLEARANCES**

114 **DELETE:** The last paragraph, “Resurfacing” in its entirety.

INSERT: The following.

Resurfacing. The minimum underclearances shall be maintained whenever resurfacing a roadway. This may require grinding the existing pavement prior to placing the resurfacing material. Immediately after completing the resurfacing operation and when the lane closures are still in the effect, the Contractor, in the presence of the Engineer, shall measure the minimum vertical underclearance. The Engineer will submit results to the Office of Structures. The cost of these measurements will be incidental to other pertinent items specified in the Contract Documents. Whenever highway overpass bridges are in the general vicinity of a pedestrian bridge and the grinding is not required to maintain the specified clearances, the roadway under the pedestrian bridge shall be ground to provide a higher underclearance than the adjacent bridges. This requirement will be waived whenever the Engineer contacts the District Engineer and the Office of Structures and determines that the grinding would have an adverse effect on drainage, utilities, etc.

TERMS AND CONDITIONS

**TC SECTION 6
RESTRICTIONS AND PERMITS**

115 **DELETE:** TC-6.14 STORING MATERIALS AND EQUIPMENT ON/AGAINST STRUCTURES RESTRICTIONS in its entirety.

INSERT: The following.

TC-6.14 RESTRICTIONS FOR PLACING AND USING EQUIPMENT ON STRUCTURES, OR STORING MATERIALS ON/OR AGAINST STRUCTURES

Materials, and waste shall not be stored on or against any structure or structure element and equipment shall not be placed or used on any structure during the construction phase or finished or final configuration unless the written permission is obtained from the Administration's District Office and the Office of Structures for each type of material or equipment to be stored.

Loads, vehicle or other weight (materials etc.) that exceeds the bridge posted weight limit, if posted, or exceeds Maryland's legal vehicle loads on bridges, (with no posted bridge weight limits), are prohibited on the structure at any time, except as modified by the following. If the Contractor's intended operations will impose loads on the structure that exceed the weights listed above, the Contractor shall submit to the Engineer the type of material, its weight, the area that will be affected by the load, and its location on the structure. No stock pile of material regardless of unit weight shall be more than 4 ft high. If equipment is to be used, submit the maximum gross weight, axle spacing, load per axle, and proposed location on the structure. The maximum gross weight must include the vehicle weights in the most critical load position, i.e. front axle on crane with boom extended and element hanging. A special Hauling Permit is a requirement anytime equipment is moved over a structure that is over legal weight limit.

If any load requires evaluation, then a professional engineer registered in the State of Maryland and experienced in bridge design shall perform a load analysis to ensure that the load on the structure will not create an overstress condition on any bridge element. This analysis also includes effects of legal loads crossing the structure, if applicable. Analyses shall be submitted for review and loading cannot be imposed until written approval is received. Such submission does not guarantee acceptance by the Office of Structures, which reserves the sole right to accept or reject the proposed loading.

For structures under construction or rehabilitation, the Contractor shall also submit information pertaining to the phase of construction, such as which members have been modified or separated from the remainder of the structure, or have been newly constructed.

Any materials or equipment that would have a detrimental affect to the structure such as aluminum products placed against concrete surfaces shall be adequately protected to prohibit them from coming in contact with each other. Any discoloration or damage to the structure as a result of material or equipment being stored on/against the structure shall be removed or repaired.



**CATEGORY 100
PRELIMINARY**

SECTION 101 — CLEARING AND GRUBBING

101.01 DESCRIPTION.

101.01.01 Definitions.

137 **DELETE:** (e) Grading Unit in its entirety.

INSERT: The following.

(e) Grading Unit. The maximum contiguous area allowed to be graded at a given time, not to exceed 20 acres.

101.03 CONSTRUCTION.

101.03.01 Erosion and Sediment Control.

138 **DELETE:** The third sentence of the second paragraph, “A grading unit need not be 20 contiguous acres”, in its entirety.

**CATEGORY 100
PRELIMINARY**

SECTION 104 — MAINTENANCE OF TRAFFIC

104.01 TRAFFIC CONTROL PLAN (TCP)

104.01.01 DESCRIPTION.

149 **DELETE:** The fourth paragraph sentence “Refer to contract Documents for Work Restrictions.” in its entirety.

INSERT: The following.

Work Restrictions. The Engineer reserves the right to modify or expand the methods of traffic control or working hours as specified in the Contract Documents. Any request from the Contractor to modify the work restrictions shall require written approval from the Engineer at least 72 hours prior to implementing the change. The Contractor shall submit a copy of the original work restrictions with the written request.

Work is not permitted on Saturdays or Sundays.

Work is not permitted on the holidays, or work day preceding and following holidays indicated below with an “X”:

- New Year's Day, January 1
- Martin Luther King's Birthday, the third Monday in January
- President's Day, the third Monday in February
- Good Friday
- Easter Weekend
- Memorial Day, the last Monday in May
- Independence Day, July 4
- Labor Day, the first Monday in September
- Columbus Day, the second Monday in October
- Veteran's Day, November 11
- Thanksgiving Day, the fourth Thursday in November
- Christmas Day, December 25

TEMPORARY LANE OR SHOULDER CLOSURE SCHEDULE			
ROADWAY	# LANE(S) / SHOULDER CAN BE CLOSED	DAY OF THE WEEK	CLOSURE PERIOD (TIME OF DAY)
MD 404 PARK ACCESS ROAD	0/0 2 LANES	ALL ALL	NEVER 24/7

149 **ADD:** The following after the last paragraph, “Any monetary savings...and the Administration.”

When closing or opening a lane on freeways, expressways, and roadways with posted speed \geq 55 mph, a work vehicle shall be closely followed by a protection vehicle (PV) during installation and removal of temporary traffic control devices. The PV shall consist of a work vehicle with approved flashing lights, either a truck-mounted attenuator (TMA) with support structure designed for attaching the system to the work vehicle or a trailer truck-mounted attenuator (TTMA) designed for attaching the system to the work vehicle by a pintle hook and an arrow panel (arrow mode for multilane roadways and caution mode on two-lane, two-way roadways).

SPECIAL PROVISIONS

CONTRACT NO. CO4125125

104.01 — TRAFFIC CONTROL PLAN

3 of 5

The work vehicle size and method of attachment shall be as specified in the TMA/TTMA manufacturer's specification as tested under NCHRP and/or MASH Test Level 3.

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/shoulder closure at no additional cost to the Administration. The Contractor's Traffic Manager shall attend Pre-Construction and Pre-Paving Meetings and shall discuss traffic control and the Traffic Control Plan including procedures to be implemented for lane closures.

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

Workers and equipment, including temporary traffic control devices needed for setting up a lane closure or restriction, are prohibited in the lane/shoulder to be closed or restricted before the time permitted in the Contract work restrictions, unless otherwise noted below or as approved by the Engineer.

Temporary traffic control devices to be used for lane/shoulder closure may be placed on the shoulder of the roadway by workers no earlier than ___ minutes prior to actual time lane/shoulder closure or restriction is permitted. When temporary traffic control devices are being installed, all work vehicles involved in the installation shall display flashing lights that provide a 360-degree visibility of the vehicles. These lights shall remain on until the full installation of TTC devices is complete. Temporary traffic signs may be displayed to traffic at this time.

Workers shall not enter a lane open to traffic. Workers may be present on shoulders to prepare for lane closure setup no earlier than ___ minutes prior to actual time lane/shoulder closure or restriction is permitted. During preparation for the lane closure, all work vehicles present at the site and involved in the installation of the lane closure or restriction shall display flashing lights that provide 360-degree visibility of the vehicles. These lights shall remain on until the full implementation of the road closure or restriction is complete.

All 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 11 ft on expressways, freeways and 10 ft on other roadways. Prior to 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 next progress estimate in conformance with the following.

This is in addition to the requirements specified in TC-4.02.

The designer shall identify the District (for freeways) or determine the Level of Service of the roadway (for other roads) and include the assessed deduction tables accordingly. All unnecessary tables should be deleted.

Level of Service may be determined by using the Congestion Assessment Maps obtained online at <http://shavmhisdwma/congestionassessmentintroduction/Default.aspx>

The lane closure penalties for freeways are categorized by the District in which they are located.

For Districts 1, 2 and 6, the following fee structure will be followed:

ASSESSED DEDUCTIONS FOR FREEWAYS	
ELAPSED TIME, (MINUTES)	DEDUCTION
<i>For 1 Lane Closures</i>	
1 – 10	\$ 100.00
Over 10	\$50.00 per minute (In addition to the original 10 minute deduction)
<i>For 2 or more Lane Closures</i>	
1 – 10	\$ 200.00
Over 10	\$100.00 per minute (In addition to the original 10 minute deduction)

For Districts 3, 4, 5 and 7, the following fee structure will be followed:

ASSESSED DEDUCTIONS FOR FREEWAYS	
ELAPSED TIME, (MINUTES)	DEDUCTION
<i>For 1 Lane Closures</i>	
1 – 10	\$ 1,000.00
Over 10	\$500.00 per minute (In addition to the original 10 minute deduction)
<i>For 2 or more Lane Closures</i>	
1 – 10	\$ 2,000.00
Over 10	\$1,000.00 per minute (In addition to the original 10 minute deduction)

The lane closure penalties for other roads are categorized by intersection Level of Service. The penalty for other roads with Level of Service D, E or F is greater than that for Level of Service A, B or C.

For Level of Service A, B or C, the following fee structure will be followed:

ASSESSED DEDUCTIONS FOR OTHER ROADS	
ELAPSED TIME, (MINUTES)	DEDUCTION
<i>For 1 Lane Closures</i>	
1 – 10	\$ 150.00
Over 10	\$75.00 per minute (In addition to the original 10 minute deduction)
<i>For 2 or more Lane Closures</i>	
1 – 10	\$ 300.00
Over 10	\$150.00 per minute (In addition to the original 10 minute deduction)

For Level of Service D, E or F, the following fee structure will be followed:

ASSESSED DEDUCTIONS FOR OTHER ROADS	
ELAPSED TIME, (MINUTES)	DEDUCTION
<i>For 1 Lane Closures</i>	
1 – 10	\$ 300.00
Over 10	\$150.00 per minute (In addition to the original 10 minute deduction)
<i>For 2 or more Lane Closures</i>	
1 – 10	\$ 600.00
Over 10	\$300.00 per minute (In addition to the original 10 minute deduction)

CATEGORY 200
GRADING

SECTION 203 — BORROW EXCAVATION

203.01.02 Notice to Contractor —Borrow Pits.

225 **ADD:** After the first paragraph.

This project is located in Caroline County, District 2. The following conditions applicable to the county or city shall be complied with and documented.

DISTRICT 1

Dorchester (DO) County

Site plan approved by Soil Conservation District.
Grading permit from County Highway Department (except City of Cambridge).
Planning and Zoning approval for use.
Critical Areas approval (if applicable).
Inspection by County.

Somerset (SO) County

Site plan approved by Soil Conservation District.
Grading Permit from the County.
Land Use permit.
Critical Areas approval by Planning and Zoning (if applicable).
Inspection by SHA.

Wicomico (WI) County

Site plan approved by Soil Conservation District.
Certificate of compliance with Planning and Zoning if located in Critical Area.
Inspection by SHA.

Worcester (WO) County

Site plan approved by Soil Conservation District.
Critical areas approved by Planning and Zoning (if applicable).
Inspection by SHA.

DISTRICT 2

Caroline (CO), Cecil (CE), Queen Anne's (QA) and
Talbot (TA) Counties

Site plan approved by Soil Conservation District.
Planning and Zoning approval.
Critical Areas approval (if applicable).
Inspection by SHA.

Kent (KE) County

Site plan approved by Soil Conservation District.
Grading permit.
Planning and Zoning approval.
Critical Areas approval (if applicable).
Inspection by SHA.

DISTRICT 3

Montgomery (MO) County

Sediment control permit and plan approval by County
Department of Environmental Protection, Division of
Water Resources Management, Storm Water Management Section/Sediment
Control.

Approval by Maryland National Capital Park and Planning Commission (if
applicable).

Inspection by County.

Prince Georges (PG) County

Site Plan approved by Soil Conservation District.

County Grading Permit.

Tree conservation plan approval by Maryland National Capital Park and
Planning Commission (if applicable).

Critical Areas approval (if applicable).

Payment of all pertinent county fees and/or securing of county required bonding.

Inspection by SHA with oversight by County.

DISTRICT 4

Baltimore (BA) County

Site Plan approved by the Department of Environmental Protection and the Soil
Conservation District.

County Grading Permit.

Critical Areas approval by the Department of Environmental Protection and
Resource Management (if applicable).

Inspection by County.

Harford (HA) County

Site Plan approved by Soil Conservation District.

County Grading Permit.

Critical Areas approval (if applicable).

Inspection by County.

DISTRICT 5

Anne Arundel (AA) County

Site Plan approved by Soil Conservation District.

Planning and zoning approval - special exception required.

Grading plan issued by the County Department of Inspections and Permits.

Critical Areas approval (if applicable).

Inspection by County and SHA.

Calvert (CA) County

Site Plan approved by Soil Conservation District.

Grading plan issued by the County after a mining permit or exemption is issued.

Critical Areas approval (if applicable).

Inspection by SHA.

Charles (CH) County
Site Plan approved by Soil Conservation District.
Special exception granted by the County.
Critical Areas approval (if applicable).
Inspection by SHA.

St. Marys (SM) County
Site Plan approved by Soil Conservation District.
County Grading Permit.
Critical Areas approval (if applicable).
Inspection by SHA.

DISTRICT 6

Allegany (AL) County
Site plan approved by Soil Conservation District.
Informational copy of plans to County Planning and Zoning Commission.
Inspection by SHA.

Garrett (GA) and Washington (WA) Counties
Site plan approval by Soil Conservation District.
Inspection by SHA.

DISTRICT 7

Carroll (CL) County
Site plan approved by County Planning Commission.
Sediment control plan approval by Soil Conservation District.
County Grading Permit.
Inspection by County.

Frederick (FR) County
Site plan approved by Soil Conservation District.
County Grading Permit.
Inspection by SHA.

Howard (HO) County
Site Plan approved by Soil Conservation District.
County Grading Permit.
Inspection by County.

BALTIMORE CITY (BC)

Site plan approved Baltimore City Department of Public Works (BCDPW).
Inspection by BCDPW.

STATE AND FEDERAL PROPERTY

Borrow pits located on state and federal property are subject to Maryland Department of the Environment approval.
Inspection by SHA.



CATEGORY 300
DRAINAGE

SECTION 308 — EROSION AND SEDIMENT CONTROL

253 **DELETE:** In its entirety.

INSERT: The following.

SECTION 308 — EROSION AND SEDIMENT CONTROL

308.01 DESCRIPTION. Apply and maintain erosion and sediment control measures to disturbed areas throughout the life of the project to control erosion and to minimize sedimentation in rivers, streams, lakes, reservoirs, bays, and coastal waters. Implement the approved Erosion and Sediment Control Plan and any approved modifications to the plan. Identify staging and stockpile areas, and apply erosion and sediment controls measures as approved.

308.01.01 Erosion and Sediment Control Manager (ESCM). Provide an Erosion and Sediment Control Manager to implement the Erosion and Sediment Control (ESC) Plan and to oversee the installation, maintenance and inspection of the ESC controls.

308.01.02 Severe Weather Event. A severe weather event occurs when rainfall exceeds 3 in. over a 24-hr period based upon rainfall data obtained from the nearest official National Weather Service (NWS) gauge station to the Site.

308.02 MATERIALS.

Riprap	901.03
4 to 7 in. Stone	901.05
Asphalt Mixes	904
Pipe	905
Gabion Wire	906
Steel Plate	909.02
Welding Material	909.03
Fence Fabric for Super Silt Fence	914.01.01
Compost	920.02.05
Soil Amendments	920.02
Fertilizer	920.03
Mulch	920.04
Soil Stabilization Matting	920.05
Seed	920.06
Straw Bales	921.08
Geotextile, Woven and Non-Woven	921.09, Class E



Geotextile, Woven Slit Film	921.09, Class F
2 to 3 in. Stone	M 43, No. 2
3/4 to 1-1/2 in. Stone	M 43, No. 4
No. 57 Stone	M 43, No. 57

308.02.01 Filter Log Casing. Casing shall be 12 in., 18 in. or 24 in. diameter and produced from 5 mil thick continuous high-density polyethylene or polypropylene, woven into a tubular mesh netting material with openings in the knitted mesh 1/8 in. - 3/8 in.

Compost shall have a soluble salt concentration less than 5.0 mmhos/cm.

308.03 CONSTRUCTION.

308.03.01 Contractor Responsibilities. Prior to beginning any earth disturbing activity, complete the following:

- (a) Demarcate all wetlands, wetland buffers, floodplains, waters of the United States, tree protection areas, and the Limit of Disturbance (LOD) according to Section 107. Ensure the demarcations are inspected and approved.
- (b) Construct erosion and sediment control measures according to 308.01.02. Ensure that controls are inspected and approved.
- (c) Ensure that all runoff is directed from disturbed areas to the sediment control measures.
- (d) Do not remove any erosion or sediment control measure without approval from the REC. Refer to GP-7.12 for unforeseen conditions.
- (e) Ensure that dewatering practices do not cause any visible change to stream clarity.

308.03.02 Schedule. Within 14 days after the Notice of Award, submit an Erosion and Sediment Control Schedule to implement the ESC Plan. Ensure the schedule indicates the sequence of construction, implementation and maintenance of controls, temporary and permanent stabilization, and the various stages of earth disturbance. Changes to the Plan must be approved prior to implementation. Include the following on the submitted plans:

- (a) Demarcation of all wetlands, wetland buffers, jurisdictional waters, floodplains, tree protection areas, and the LOD prior to any earth disturbing activity.
- (b) Clearing and grubbing of areas necessary for installation of perimeter controls specified in the Contract Documents.



- (c) Construction of perimeter controls specified in the Contract Documents.
- (d) Remaining clearing and grubbing.
- (e) Roadway grading including off-site work.
- (f) If applicable, utility installation and whether storm drains will be used or blocked during construction.
- (g) Final grading, landscaping, and stabilization.
- (h) Removal of perimeter controls.

Work is prohibited on-site and off-site until the Erosion and Sediment Control schedules and methods of operation have been accepted by the Administration.

308.03.03 Standards and Specifications. Construct and maintain the erosion and sediment control measures and devices in accordance with the latest Maryland Department of the Environment (MDE) Erosion and Sediment Control and Stormwater Management regulations, “Maryland Standards and Specifications for Soil Erosion and Sediment Control”, “Maryland Stormwater Design Manual, Volumes I and II”, “SHA Field Guide for Erosion and Sediment Control”, and as specified in the Contract Documents. Keep a copy of the latest “Maryland Standards and Specifications for Soil Erosion and Sediment Control” on the site at all times.

308.03.04 Erosion and Sediment Control Plan (ESC Plan) and Sequence of Construction. Implement the Administration’s approved ESC Plan and Sequence of Construction. Minor adjustments to the sediment control locations may be made in the field with the approval of the Engineer and the REC. Major revisions, deletions, or substitutions to the ESC Plan require a formal review and written approval. Submit changes to the approved ESC Plan to the Administration in writing at least 14 days prior to implementing the change. Ensure that any changes to the ESC Plan or Sequence of Construction are approved prior to implementing the change.

308.03.05 Erosion and Sediment Control Manager. At least 10 days prior to beginning any work, assign and submit the name and credentials for approval an Erosion and Sediment Control Manager (ESCM). Ensure that the ESCM and the superintendent have successfully completed the MDE “Responsible Personnel Training for Erosion and Sediment Control” and the Administration’s “Erosion and Sediment Control Certification Training for Contractors and Inspectors”. The certifications must be current at all times. If the certification expires or is revoked for either person, immediately replace the person with an appropriately certified person acceptable to the Administration. No work may proceed without the appropriate certified personnel in place. Any substitutes for the



ESCM will be subject to approval. The Administration reserves the right to require a reassignment of the ESCM duties to another individual for any reason.

Ensure that the ESCM is thoroughly experienced in all aspects of construction and has the required certifications. The ESCM is primarily responsible for and has the authority to implement the approved erosion and sediment control plans, schedules and methods of operation for both on-site and off-site activities. The ESCM's duties include:

- (a) Attend the Pre-Construction Erosion and Sediment Control Field Meeting and periodic field Erosion and Sediment Control Meetings to evaluate the effectiveness of measures already installed, and to plan for the implementation of necessary controls proposed for succeeding areas of soil disturbance.
- (b) Inspection of the erosion and sediment controls on a daily basis to ensure that all controls are in place at all times and to develop a list of activities and schedules to ensure compliance with the Contract Documents.
- (c) Maintenance of a daily log of these inspections, including actions taken, and submit a written report at the end of the work day.
- (d) Accompanied by the Engineer, conducting after storm inspections both during and beyond normal working hours and submitting a written report.
- (e) Having the authority to mobilize crews to make immediate repairs to the controls during working and nonworking hours.
- (f) When requested, accompanying the Engineer during REC Inspections and inspections made by the regulating agencies.
- (g) Coordination with the Engineer to ensure that all corrections are made immediately and that the project is in compliance with the approved plan at all times.

308.03.06 Quality Assurance Ratings. A Regional Environmental Coordinator (REC) will frequently inspect each project to ensure compliance with the approved Erosion and Sediment Control and Stormwater Management Plans. The scores will be reported on Form No. OOC61/QA-1, Erosion/Sediment Control and Stormwater Management Field Investigation Report. The REC will use the scores to determine the following ratings.



Quality Assurance Ratings

SCORE	RATING
≥90.0	A
80.0 - 89.9	B
70.0 - 79.9	C
60.0 - 69.9	D
< 60.0	F

- (a) **Rating A.** The project is in compliance. Minor corrective action may be necessary.
- (b) **Rating B.** The project is in compliance; however, corrective action is necessary.
- (c) **Rating C.** The project is in compliance; however, deficiencies noted require corrections. Shutdown conditions could arise quickly. Project will be reinspected within 72 hours.
- (d) **Rating D.** The project is in non-compliance. The Administration will shut down earthwork operations. Focus work efforts on correcting erosion and sediment control deficiencies. The project will be reinspected within 72 hours. Complete all required corrective actions within the 72 hour period for the project to be upgraded to a 'B' rating. Failure to upgrade the project from a 'D' rating to a 'B' or A will result in the project being rated an 'F'. Liquidated damages will be imposed for each day the project has a 'D' rating.
- (e) **Rating F.** The project is in non-compliance. An 'F' rating indicates a score less than 60 or the appropriate permits and approvals have not been obtained; or that the limit of disturbance has been exceeded, or that wetlands, wetland buffers, Waters of the United States (WUS), floodplains, and tree preservation areas as specified in Section 107 have been encroached upon; or that work is not proceeding according to the approved Erosion and Sediment Control Plan and schedules. The Administration will shut down the entire project until the project receives a 'B' or better rating. Focus all work efforts on correcting erosion and sediment control deficiencies. Liquidated damages will be imposed for each day the project has an 'F' rating.

308.03.07 Shutdowns. If a project is rated 'C', correct all deficiencies within 72 hours. The project will be reinspected at the end of this period. If the deficiencies have not been satisfactorily corrected, the project will be rated 'D' and all earthwork operations will be shut down until the project is rated 'B' or better.



If consecutive 'C' ratings are received, the Contractor will be alerted that their overall effort is marginal and a shutdown of all earthwork operations is imminent if erosion and sediment control efforts do not substantially improve within the next 72 hours. The project will be reinspected at the end of this period. If the deficiencies are not satisfactorily corrected or other deficiencies are identified that result in less than a 'B' rating on Form No. OOC61/QA-1, a 'D' rating will be given and all earthwork operations will be shut down.

If these deficiencies are not corrected, an 'F' rating will be given, and the entire project will be shut down until the project receives a 'B' or 'A' rating. When degradation to a resource could occur, or if the Contractor is unresponsive, the Administration may elect to have these corrective actions performed by another contractor or by Administration maintenance staff. All costs associated with this work will be billed to the original Contractor in addition to liquidated damages.

The second time that a project is rated 'F', the Erosion and Sediment Control Training Certificate issued by the Administration will be immediately revoked from the project superintendent and the Erosion and Sediment Control Manager for at least a six month period and until successful completion of the Administration's Erosion and Sediment Control Certification Program.

308.03.08 Incentive Payments. When specified in the Contract Documents, a project may include incentive payments. Starting at the Notice to Proceed, an Incentive Payment will be made for a rating quarter consisting of 3 months when at least four inspections were performed by the REC and an average score equal to or greater than 85.0 for the entire rating quarter is received. The quarterly incentive payment will be made within 60 days after the end of the rating quarter. No incentive will be paid for partial quarters or for quarters with less than four inspections. No incentives will be paid for any quarter in which a 'D' or 'F' rating is received. When a project receives no 'D' or 'F' ratings and the overall average score is equal to or greater than 85.0, the final incentive payment will be made at final project closeout. If a time extension is granted, additional quarterly incentive payments will be drawn from the final incentive payment.

308.03.09 Liquidated Damages. Whenever a project is rated 'D' or 'F', the Liquidated Damages will be assessed. Liquidated Damages must be paid within 30 days from the date of notification.

308.03.10 Severe Weather Event. Maintain, repair, or replace any damaged erosion and sediment control devices within 48 hours of a severe weather event occurrence.

308.03.11 Preconstruction Conference. Present a general overview at the Preconstruction Conference of how erosion and sediment control measures will be implemented on the project.



308.03.12 Initial Controls. Install all perimeter controls such as silt fence, earth dikes/swales, check dams, traps, and basins, prior to the grubbing operation.

If it is determined that the clearing area has been disturbed and a potential for sediment runoff or erosion exists, install the controls at that time as directed.

308.03.13 Maintenance. Maintain erosion and sediment control devices at all times whether the project is active or inactive. Maintain access to all erosion and sediment controls until the controls are removed. Lack of this maintenance will affect the Quality Assurance Rating.

Inspect controls immediately following storm events. Clean out as necessary and repair all damage as the first order of business after the storm event.

308.03.14 Stabilization Requirements. Following initial soil disturbance, complete permanent or temporary stabilization within:

- (a) Three calendar days for the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and
- (b) Seven calendar days as to all other disturbed or graded areas on the project site not under active grading.

When the excavation or embankment reaches the bottom of the subgrade, those areas in which paving will be placed are exempt from the stabilization requirements. Areas between temporary berms, except median areas, need not be stabilized during incremental stabilization.

Sensitive areas may require less than three or seven day stabilization. Maintain as necessary to ensure continued stabilization.

Track slopes within two days of establishment according to 701.03.

308.03.15 Waste Areas. Off-site waste areas on State or Federal property require MDE approval. All other off-site waste areas must be approved by the appropriate Soil Conservation District for each county or the Baltimore City Department of Public Works. Protect waste areas and stockpile areas with erosion and sediment control measures within the three or seven day stabilization requirement.

308.03.16 MDE Inspections. Work is subject to field inspections by MDE. If noncompliance with erosion and sediment control provisions is determined, their representative will immediately notify the Engineer relative to corrective action. This corrective action may require a shutdown of construction activities until the



noncompliance is satisfactorily corrected.

308.03.17 Stabilized Construction Entrance. Construct stabilized construction entrances at the specified locations.

Rehabilitate stabilized construction entrance consists of periodic top dressing with additional aggregate, replacement of pipe, or other repairs to the entrance and sediment trapping devices.

Place wash racks as directed to prevent tracking of mud and sediment from disturbed areas.

308.03.18 Side or Berm Ditches and Culverts. Construct side ditches in fill areas and berm ditches in cuts, including lining. Protect these linings from sediment deposits. Place silt fence along the banks of existing streams as shown in the Contract Documents prior to placing any culverts. To avoid sedimentation during construction, divert the streams around the location of the culvert until the proposed culvert and channel are stabilized.

308.03.19 Erosion and Sediment Control Original Excavation. Excavate, construct embankments, grade, and backfill for sediment traps, sediment basins, and other sediment controls.

Ensure that excavation and embankments meet the dimensions for each sediment control as specified. Stockpile excavated material and use for backfill when the sediment controls are removed. ■

308.03.20 Erosion and Sediment Control Cleanout Excavation. Remove accumulated sediment from sediment controls or other areas during routine maintenance of sediment controls, or as directed.

Clean out sediment traps as necessary to ensure that at least 50 percent of the wet storage capacity is available at all times. Ensure that riprap outlet sediment traps have at least 75 percent of the wet storage capacity available at all times. Remove sediment from silt fence, super silt fence, stone outlet structures, stone check dams, and straw bales when it reaches 50 percent of the height of the device.

Place removed sediment in an approved waste site. Material stored on-site may be reused once it is dried and it meets embankment requirements.

308.03.21 Heavy Use Areas. Locate and size Heavy Use Areas used for activities such as staging and storage. Obtain any necessary permits or modifications for non-specified areas.



308.03.22 Stockpile Areas. Locate and size Stockpile Areas. Obtain any necessary permits or modifications for non-specified stockpile areas.

308.03.23 Earth Dike. Do not use sod as stabilization unless specifically approved.

308.03.24 Temporary Swale. Do not use sod as stabilization unless specifically approved.

308.03.25 Perimeter Dike Swale. Do not use sod as stabilization unless specifically approved.

308.03.26 Pipe Slope Drain. When slope drains are placed on grade, construct interceptor berms to direct flow into the flared end section.

308.03.27 Gabion Inflow Protection. Construct according to Section 313.

308.03.28 Rock Outlet Protection. Construct according to Section 312.

308.03.29 Gabion Outlet Protection. Construct according to Section 313.

308.03.30 Plunge Pool. Construct according to Section 312.

308.03.31 Super Silt Fence. Construct as specified with the following exception:

Run a 7 gage top tension wire continuously between posts.

308.03.32 Filter Berms. Construct berms of wood chips and up to 50 percent Compost.

308.03.33 Filter Log. Use Compost for the filter media. Install Filter logs parallel to contours and perpendicular to sheet flow from disturbed areas.

Where a connection is needed, there are two options based on whether the sock is being filled on or offsite. Overlap prefilled socks by 1-ft minimum and staked where they connect. Sleeve socks that are filled onsite. After one log section is filled and tied off (knotted), pull the second log section over the first (2-ft) and “sleeve,” creating an overlap.

Remove sediment when it has accumulated to a depth of half the exposed height of the sock. Replace the filter sock if torn or damaged. Reinstall the filter sock if undermining or dislodging occurs.

Drive stakes perpendicular to water flow at a maximum of 8 ft intervals. Do not permit traffic to cross filter socks.



Upon stabilization of the area tributary to the sock and approval, remove stakes. The sock may be left in place and vegetated or removed. In the former case, cut the mesh open, remove all non-biodegradable material, spread the compost as a soil supplement, and seed as specified.

308.03.34 Filter Bag. Determine the bag dimensions necessary to provide the required storage volume. Determine pump and hose sizes.

308.03.35 Straw Bales for Sediment Control. Embed the bales to a depth of at least 4 in., and anchor in place with two No. 4 reinforcement bars, steel pickets, or 2 x 2 in. wood stakes, 36 in. length. Locate the anchoring devices at approximate third points along the longitudinal center line of each bale, driven through the bale and into the ground to a depth of 12 to 18 in.

308.03.36 Stone Outlet Structure. Stabilize the area immediately after removal of the structure.

308.03.37 Temporary Gabion Outlet Structure. As specified in Section 313. Grade and stabilize the area beneath the structure, immediately upon removal.

308.03.38 Portable Sediment Tank. Determine the dimensions necessary to provide the required storage volume.

308.03.39 Dewatering. Dewater only when conditions allow. Ensure that dewatering activities do not cause any visible change to stream clarity. If a sediment plume is visible, immediately cease the dewatering activity. Direct any pumping activity, including dewatering sediment traps and basins, through an approved dewatering device.

308.03.40 Sediment Traps. Excavate sediment traps to the specified length, width, and depth.

At sites where filtration or infiltration devices are used for the control of storm water, prevent runoff from unstabilized areas from entering the infiltration devices. Ensure that bottom elevations of sediment control devices are at least 2 ft higher than the finish grade bottom elevation of the filtration or infiltration device. When converting a sediment trap to a permanent stormwater facility, remove and dispose of all accumulated sediment prior to final grading of the device.

When grading and paving operations are complete and vegetation is established on the slopes and channels to the satisfaction of the Engineer, refill the sediment traps with suitable materials, and shape and treat them as specified.

308.03.41 Stone for Sediment Control. Place No. 57 stone, 3/4 to 1-1/2 in. stone, 2 to 3 in. stone, 4 to 7 in. stone, and riprap for sediment control as specified.



308.03.42 Maintenance of Stream Flow. Maintain the continuous flow of waterways during operations as specified or directed.

- (a) Implement the approved plan included in the Contract Documents. Any changes to the approved plan require approval from the appropriate regulatory authorities.
- (b) A different plan for maintenance of stream flow may be submitted, but approval from the Engineer and the appropriate approval authority will be required.
- (c) If the stream diversion system as shown is not capable of blocking the flow of water through the soil beneath the system, design and provide an effective means of diverting the water away from the designated areas.
- (d) Ensure that all excavation performed within the diverted stream is performed in a dewatered condition, which may require additional pumps, sheeting, shoring, cofferdams, etc.
- (e) If the proposed system does not perform satisfactorily or additional material and equipment is required to dewater the site and excavated areas, adjust the stream diversion system and obtain approvals.
- (f) Securely anchor the stream diversion system in place to prevent movement during high water events. Submit the proposed method of anchoring for approval. Do not install anchors beyond the limits of disturbance or infringe on the channel area available for stream flow.
- (g) Upon completion of construction and after temporary drainage devices have served their purpose, remove and dispose of the devices in an acceptable manner.

308.03.43 Removal of Controls. Do not remove erosion and sediment control measures until all previously disturbed areas are vegetated with at least a 3 in. growth of grass, and the removal has been approved. Backfill, grade, and stabilize.

308.04 MEASUREMENT AND PAYMENT. The payment will be full compensation for all material, labor, equipment, tools, and incidentals necessary to complete the work. The maintenance, repair, resetting, and final removal of all erosion and sediment control devices will not be measured, but the cost will be incidental to the Contract price to construct the device unless otherwise specified in the Contract Documents.

308.04.01 Erosion and sediment control manager will not be measured but the cost will be incidental to Erosion and Sediment Control items specified in the Contract Documents.



308.04.02 Implementation of the Erosion and Sediment Control Plan will not be measured but the cost will be incidental to the Erosion and Sediment Control items specified in the Contract Documents.

308.04.03 No claims against the Administration will be considered due to a shutdown of the grading operations or the entire project.

308.04.04 Incentive Payments and Liquidated Damages. The Contract Documents will specify the amounts of incentive payments and liquidated damages that apply if applicable.

308.04.05 Erosion and Sediment Controls that are damaged and replaced as a result of a Severe Weather Event will be measured and paid for at the Contract unit price applicable to the pertinent items.

308.04.06 Stabilized Construction Entrance will be measured and paid for per each and includes all excavation, geotextile, aggregate, pipe, rehabilitation, relocation and incidentals to complete the work.

308.04.07 Wash Racks for Stabilized Construction Entrance will be measured and paid for per each and includes racks, excavation, wash water and incidentals to complete the work.

308.04.08 Erosion and Sediment Control Original Excavation will be measured and paid for at the Contract unit price per cubic yard. The payment will include excavation, backfill, grading and disposal.

308.04.09 Erosion and Sediment Control Cleanout Excavation will be measured and paid for at the Contract unit price per cubic yard. The payment will also include excavation and disposal.

308.04.10 Temporary Mulch will be measured and paid for as specified in 704.04.01.

308.04.11 Temporary Seed will be measured and paid for as specified in 704.04.02.

308.04.12 Turfgrass Sod will be measured and paid for as specified in 708.04.01.

308.04.13 Soil Stabilization Matting will be measured and paid for as specified in 709.04.

308.04.14 Temporary earth berms and interceptor berms for incremental stabilization will not be measured, but the cost will be incidental to the excavation items specified in the Contract Documents.



308.04.15 Heavy Use Areas will not be measured but will be incidental to the pertinent items.

308.04.16 Stockpile Areas will not be measured but will be incidental to the pertinent items.

308.04.17 Earth Dikes will be measured and paid for at the Contract unit price per linear foot. 4 to 7 in. stone, temporary seeding, and soil stabilization will be measured and paid for as specified in 308.04.25, 704.04, and 709.04, respectively.

308.04.18 Temporary Swales will be measured and paid for at the Contract unit price per linear foot. 4 to 7 in. stone, temporary seeding, and soil stabilization matting will be measured and paid for as specified in 308.04.25, 704.04, and 709.04, respectively.

308.04.19 Perimeter Dike/Swales will be measured and paid for at the Contract unit price per linear foot. Temporary seeding and soil stabilization matting will be measured and paid for as specified in 704.04 and 709.04, respectively.

308.04.20 Temporary storm drain diversions will be measured and paid for at the Contract unit price per linear foot of the size specified and will include all grading, pipe, connections and any incidentals necessary to complete the work.

308.04.21 Temporary Asphalt Berm will be measured and paid for at the Contract unit price per linear foot. The removal of the temporary asphalt berm will not be measured but the cost will be incidental to the Contract price.

308.04.22 Clear Water Diversions will be measured and paid for at the Contract unit price per linear foot of the size specified and will include all pipe, connections, anchors, sandbags, sheeting, dewatering and any incidentals necessary to complete the work.

308.04.23 Temporary Barrier Diversions will be measured and paid for at the Contract unit price per linear foot and will include all barrier, sandbags, sheeting, dewatering and any incidentals necessary to complete the work.

308.04.24 Mountable Berms will be measured and paid for at the Contract unit price per each and will include all earthwork, stone, geotextile, and any incidentals necessary to complete the work.

308.04.25 Diversion Fence will be measured and paid for at the Contract unit price per linear foot.

308.04.26 Pipe Slope Drain will be measured and paid for at the Contract unit price per linear foot. The payment will also include excavation, backfill, flared end section, geotextile, anchors, coupling bands, and pipe elbows.



308.04.27 Stone Check Dam will be measured and paid for as specified in 308.04.17.

308.04.28 Riprap Inflow Protection will be measured and paid for as specified in 308.04.17.

308.04.29 Gabion Inflow Protection will be measured and paid for as specified in 313.04.

308.04.30 Rock Outlet Protection will be measured and paid for at the Contract unit price per square yard of Riprap Slope and Channel Protection.

308.04.31 Plunge Pool will be measured and paid for at the Contract unit price per square yard of Riprap Slope and Channel Protection.

308.04.32 Silt Fence will be measured and paid for at the Contract unit price per linear foot.

308.04.33 Silt Fence on Pavement will be measured and paid for at the Contract unit price per linear foot of Silt Fence.

308.04.34 Super Silt Fence will be measured and paid for at the Contract unit price per linear foot.

308.04.35 Clear Water Pipes through Silt Fence or Super Silt Fence will not be measured but will be incidental to the pipe and silt fence items.

308.04.36 Filter Berms will be measured and paid for at the Contract unit price per linear foot.

308.04.37 Filter Logs will be measured and paid for at the Contract unit price per linear foot for the size specified.

308.04.38 Temporary Stone Outlet Structures will be measured and paid for as specified in 308.04.25. The baffle board and stakes will not be measured but the cost will be incidental to the Contract price.

308.04.39 Temporary Gabion Outlet Structures will be measured and paid for at the Contract unit price per each.

308.04.40 Standard Inlet Protection will be measured and paid for at the Contract unit price per each for Inlet Protection.



308.04.41 At Grade Inlet Protection will be measured and paid for at the Contract unit price per each for Inlet Protection.

308.04.42 Curb Inlet Protection will be measured and paid for at the Contract unit per each for Inlet Protection.

308.04.43 Median Inlet Protection will be measured and paid for at the Contract unit per each for Inlet Protection.

308.04.44 Median Sump Inlet Protection will be measured and paid for at the Contract unit per each for Inlet Protection.

308.04.45 Combination Inlet Protection will be measured and paid for at the Contract unit per each for Inlet Protection.

308.04.46 Gabion Inlet Protection will be measured and paid for at the Contract unit per each for Inlet Protection.

308.04.47 Catch Basin Insert will be measured and paid for at the Contract unit price per each for Inlet Protection.

308.04.48 Removable Pumping Station will be measured and paid for at the Contract unit price per each. The payment will also include excavation, pipe, geotextile, wire mesh, steel plate, hose, pump, and connections.

Stone will be measured and paid for as specified in 308.04.57.

308.04.49 Sump Pit will be measured and paid for at the Contract unit price per each. The payment will also include excavation, pipe, geotextile, wire mesh, steel plate, hose, pump, and connections.

Stone will be measured and paid for as specified in 308.04.57.

308.04.50 Portable Sediment Tank will be measured and paid for at the Contract unit price per each. The payment will also include pipe, geotextile, wire mesh, steel plate, hose, pump, and connections. No adjustments will be made for resizing or relocating portable sediment tanks to meet stream clarity discharge requirements.

308.04.51 Filter Bags will be measured and paid for at the Contract unit price per each and will include pump, hoses, connections, straw bales, sizing, locating, relocating, disposal and any other incidentals necessary. No adjustments will be made for resizing or relocating to meet Permit conditions or turbidity requirements.



308.04.52 Sediment traps will be measured and paid for at the Contract unit price for one or more of the items listed below:

- (a) Erosion and Sediment Control Original Excavation as specified in 308.04.03.
- (b) Pipe as specified in 303.04.
- (c) Stone as specified in 308.04.57.
- (d) Inflow protection as specified in 308.04.09 and 308.04.10.
- (e) Baffle board and stakes will not be measured but the cost will be incidental to the other items.
- (f) Temporary risers will be measured and paid for at the Contract unit price per each.
- (g) Anti-seep collars will be measured and paid for at the Contract unit price per each.
- (h) Geotextile will not be measured but the cost will be incidental to the stone.

308.04.53 Sediment Basins will be measured and paid for at the Contract unit price for one or more of the following items:

- (a) Earthwork as specified in 201.04.
- (b) Pipe as specified in 303.04.
- (c) Stone as specified in 308.04.57.
- (d) Baffle board and stakes will not be measured but the cost will be incidental to the other items.
- (e) Temporary risers will be measured and paid for at the Contract unit price per each and include trash racks, draw down devices, concrete bases, projection collars, riser connectors and any other incidentals.
- (f) Modifying Stormwater Management Riser Structures and installing dewatering pipe systems will be measured and paid for at the Contract unit price per each for Convert Stormwater Management Riser for Sediment Control. Converting the risers back to their permanent state will be incidental to pipe.
- (g) Anti-seep collars will be measured and paid for at the Contract unit price per each.
- (h) Geotextile will not be measured but the cost will be incidental to the stone.



308.04.54 Temporary Access Bridge will be measured and paid for at the Contract Lump Sum price.

308.04.55 Temporary Access Culvert will be measured and paid for at the Contract unit price per linear foot.

308.04.56 Onsite Concrete Washout Structures will not be measured but will be incidental to the various concrete mixes.

308.04.57 Restabilization will not be measured when permanently stabilized areas are disturbed by grading operations or other activities not specifically approved.

308.04.58 Stone for sediment control will be measured and paid for at the Contract unit price per ton for the pertinent Stone for Sediment Control item. Geotextile, excavation, and backfill will not be measured but the cost will be incidental to the Contract price.

308.04.59 Straw Bales will be measured and paid for at the Contract unit price per linear foot measured along the approximate center line of the row of bales. Excavation and anchoring the straw bales will not be measured but the cost will be incidental to the Contract price.

308.04.60 Maintenance of Stream Flow will not be measured but will be paid for at the Contract lump sum price. The payment includes design, redesign providing diversion structures regardless of the type required to satisfactorily divert the stream flow, anchoring of the system, excavation, backfill, dewatering the site and excavation within the stream diversion area, maintenance of the diversion system, sandbags, polyethylene sheeting, diversion pipes, pumps, hoses, connections, portable sediment tanks and obtaining any necessary permits. Payment will not be adjusted for alternative stream diversion systems regardless of any changes in quantities from that shown in the Contract Documents. The provisions of GP-4.05 will not apply to this work.



**CATEGORY 500
PAVING**

SECTION 504 — HOT MIX ASPHALT PAVEMENT

466 **DELETE:** SECTION 504 — HOT MIX ASPHALT PAVEMENT in its entirety.

INSERT: The following.

SECTION 504 — ASPHALT PAVEMENT

504.01 DESCRIPTION. Construct Asphalt Pavement.

504.02 MATERIALS.

Performance Graded Asphalt Binders	904.02
Tack Coat	904.03
Asphalt Mixes	904.04
Crack Filler	911.01
Production Plants	915

504.03 CONSTRUCTION.

Quality Control Plan. Submit a Plant Quality Control Plan and a Field Quality Control Plan (QCP) at least 30 days prior to placement of any asphalt pavement. Submit the Plant QCP to the Office of Materials Technology (OMT) for approval. Submit the Field QCP to the District Engineer for approval. The Plans shall contain a statistically based procedure of random sampling and show methods proposed to control the equipment, materials, production, and paving operations. Discuss the QCP requirements in the pre-construction, pre-pave and progress meetings.

The Plant and Field QCP shall contain:

- (a) Name and location of asphalt production plants,
- (b) Laboratory and field personnel qualifications,
- (c) Inspection and record keeping methods, and
- (d) Minimum frequencies of sampling and testing.

Use the Quality Control Plant Template (www.roads.maryland.gov) to address all requirements necessary for plant quality control and plant approval.



Corrective actions will be taken for unsatisfactory construction practices and deviations from the Contract Documents.

Plan Administrator and Certified Technicians. The QCPs shall designate a Plan Administrator who shall have full authority to institute any action necessary for the successful implementation of the Plan. The Plan Administrator may supervise the QCP on more than one project if that person can contact the job site within one hour after being notified.

The QCP shall also designate a Certified Asphalt Plant Technician – Level 2, a Certified Asphalt Field Technician, a Certified Inertial Profiler Operator, a Certified Asphalt Plant Technician – Level 1, or Trainee Technicians per the Mid-Atlantic Region Technician Certification Program (MARTCP) and the Maryland Technician Certification Program.

A Certified Plant Technician shall be present at the plant during asphalt production and shipment unless otherwise approved in the Plant QCP. The technician shall perform quality control sampling, testing and documentation as specified.

A Certified Field Technician shall be present at the job site unless otherwise approved in the Field QCP. The technician shall be responsible for the required field quality control sampling and testing. Deviations from the QCP shall be cause for immediate suspension of production and paving operations.

The Certified Technicians shall perform sampling for quality control, quality assurance, acceptance, split sampling, and verification. Submit quality control test results to the Engineer.

MARTCP-Certified Technicians found deficient in their duties will have their certification(s) rescinded, as determined. Replace the deficient technician with a certified technician before resuming production and paving operations.

Records. Maintain complete records of sampling, testing, corrective actions and quality control inspection results. Provide copies of the reports upon request.

Maintain linear control charts or use other types of control charts (such as standard deviation or range), as approved. Control charts may be maintained by production, by mix, or by mix per project. Maintain the control charts in the quality control laboratory per the QCP. The control charts shall identify the mix design number, each test result, and the upper and lower limits specified for each test. Retain all original Quality Control worksheets for five years.

Quality Assurance (QA). The Administration will perform independent QA sampling, testing and inspections. QA consists of the following:

- (a) Periodically observe the performance of Quality Control (QC) or QA testing,
- (b) Monitoring control charts,



- (c) Directing the sampling of mixes behind the paver prior to compaction,
- (d) Directing the sampling of mixes at the plant site,
- (e) Directing the sampling of cores taken from the compacted pavement,
- (f) Monitoring conformance with the approved QCP(s), and
- (g) Quality control sampling and testing procedures and quality control sampling and testing equipment will be evaluated per the Independent Assurance (IA) program.

504.03.01 Equipment. All production and paving equipment will subject to approval. Ensure the plant is ready for inspection per 915.01.02.

Hauling Units. Refer to 915.02(f).

Pavers. Pavers shall be equipped with a means of preventing the segregation of the coarse aggregate particles when moving the mix to the paver augers. The means and methods used may consist of chain curtains, deflector plates, or other such devices, or any combination of these per the manufacturer's recommendations. Demonstrate that modifications to the paving equipment have been implemented on all pavers prior to use on the project.

Use a self-contained, self-propelled unit for mainline paving. Inspection and approval will be based upon the manufacturer's recommendations. The paver shall:

- (a) Produce a finished surface of the required smoothness and texture without tearing, shoving, or gouging the mix.
- (b) Be operated in a manner which delivers a homogeneous mix the full width of the pavement.
- (c) Have automatic controls capable of maintaining the grade and transverse slope within the required tolerances set forth in the contract documents.
- (d) Use auger extensions to maintain a distance no greater than 18 in. from the end of the auger to the end gate when screed extensions are used.

Provide reference lines or other approved markings to control the horizontal alignment.

Manual operation will be permitted to make grade changes for constructing irregularly shaped and minor areas.

The equipment may be operated manually for the remainder of the workday if a malfunction of any automatic control occurs, as directed.



Rollers. Rollers shall be self-propelled, reversible, and steel wheeled or pneumatic tired. Inspect all rollers and present them for approval before use. Rollers shall be operated:

- (a) In conformance with the manufacturer's recommendations.
- (b) In a manner that does not damage the pavement.
- (c) In a manner that delivers the optimal combination of density and ride requirements.
- (d) In a manner that protects bridge decks. Do not use rollers in vibratory mode when paving bridge decks.

504.03.02 Weather Restrictions. Place mixes used as the final surface when the ambient air and surface temperatures are at least 40 F. Ensure that surfaces to be paved are clean and dry before paving, as approved.

- (a) Place mixes used as intermediate and base layers when the ambient air and surface temperatures are at least 32 F.
- (b) Place polymer-modified surface mixes when the ambient air and surface temperatures are at least 50 F.
- (c) When it begins raining while the work is underway, material en route from the plant may be used at risk.
- (d) The Administration reserves the right to perform any testing necessary to ensure the quality of the pavement.
- (e) All additional testing and associated costs, including maintenance of traffic, will be at no cost.

If material placement is halted due to weather conditions, waste all material en route at no additional cost.

Do not place asphalt on a frozen graded aggregate base.

504.03.03 Foundation Preparation. Construct the foundation as specified prior to paving. Remove all excess crack filler and patch material before paving over existing pavement. All spalls and potholes shall be cleaned, tack coated, filled with asphalt, and tamped before paving. Adjust to grade manholes, valve boxes, inlets, and other construction appurtenances within the area to be paved as directed.

504.03.04 Tack Coat. Ensure the surface is dry and clear of all loose and foreign materials prior to application. Apply the tack coat uniformly across the surface using an application rate of 0.01 to 0.05 gal/yd² as directed.



504.03.05 Non-Tracking Tack Coat (NTTC). The Manufacturer shall supply a QCP for the NTTC detailing the handling and application procedures per PP71-11, and test results from an independent, accredited laboratory for shear and tensile strength.

- (a) Sample the NTTC as directed and submit to OMT's Asphalt Technology Division. All samples will be tested against the manufacturer's specifications. Material out of compliance will not be accepted for use.
- (b) Use equipment to heat and apply the NTTC at an application temperature range that conforms to the manufacturer's recommendations. Apply the NTTC in accordance with 504.03.02 and as directed.
- (c) Apply the NTTC uniformly with a pressure distributor. Use hand spraying equipment only in areas inaccessible to the pressure distributor. Apply the NTTC using an application rate of 0.05 to 0.10 gal/yd² and do not dilute with water. The quantity, rate of application, temperature, and areas to be tacked shall be approved prior to application.
- (d) Do not clean or discharge the tack coat distributor into ditches, onto shoulders or along the right of way. Park the distributor so the spray bar will not drip NTTC onto the surface of the traveled pavement.
- (e) Exclude all traffic from sections treated with NTTC until the tack has cured and will no longer track onto adjacent non-treated areas. Adjacent pavement surfaces shall show minimal visible evidence and pavement markings shall show no visible evidence of tracking.

504.03.06 Asphalt Placement. Delivery and placement of the asphalt should be continuous. Place the asphalt while the temperature is at least 225 F, or as specified in the Field QCP. Place the asphalt with a paver used that conforms to 504.03.01. Do not broadcast loose mix over the new surface.

504.03.07 Compaction. Roll the asphalt immediately after placement and compact to the proper in-place density and ride smoothness. Incentive or disincentive price adjustment for density will be as specified in 504.04.02. Use steel wheel rollers for the first rolling of all joints and edges, the initial breakdown rolling, and the finish rolling. Use a power driven trench roller when base widening is too narrow to permit the use of conventional rollers.

Construct an earth berm or shoulder against the loose asphalt as soon as it is placed. The trench must be excavated wider than the proposed width. Roll and compact the two materials simultaneously.

No traffic is permitted on the pavement after rolling until it has cooled to less than 140 F. Roller marks shall not be visible after rolling operations.



504.03.08 Joints. Construct joints as directed and as follows:

- (a) Stagger longitudinal and transverse joints in successive courses so that one is not directly above the other.
- (b) Stagger transverse joints by the length of the paver.
- (c) Stagger longitudinal joints at least 6 in. and arrange so that the longitudinal joint in the top course is within 6 in. of the line dividing the traffic lanes.
- (d) Construct joints in a manner that provides a continuous bond between the old and new surfaces.
- (e) Overlap the existing pavement 1 to 1.5 in. when constructing longitudinal joints adjacent to existing asphalt pavements.
- (f) The initial longitudinal roller pass shall be on the uncompacted hot mat and 6 in. to 1 ft from the joint. The successive roller pass shall compact the overlapped material and the 6 in. to 1 ft material simultaneously.
- (g) Apply tack coat to joints as directed. Cut back the edge of the existing pavement for its full depth at transverse joints when placing a surface course, and apply tack coat material as directed.
- (h) Apply tack coat to all contact surfaces before placing the mix against curbs, gutters, headers, manholes, etc.

504.03.09 Edge Drop-off. When paving highways carrying traffic:

- (a) Match all compacted pavement courses exceeding 2-1/2 in. in depth with the abutting lane or shoulder on the same working day.
- (b) For compacted pavement courses of 2-1/2 in. or less are placed, use the option of paving the abutting lane or shoulder on alternate days.
- (c) Pave all abutting lanes or shoulders prior to weekends and temporary shutdowns.
- (d) Place advance warning traffic control devices per Section 104 where uneven pavement joints.

504.03.10 Tie-In. When paving highways carrying traffic:

- (a) Construct a temporary tie-in at least 4 ft in length for each 1 in. of pavement depth when the posted speed \leq 40 mph.



- (b) Construct a temporary tie-in at least 10 ft in length for each 1 in. of pavement depth when the posted speed >40 mph.
- (c) Construct temporary tie-ins before traffic is allowed to cross the transverse joint.
- (d) Construct temporary tie-ins 10 ft or greater using a paver meeting 504.03.01.
- (e) Remove a transverse portion of the existing pavement at the final tie-in point to maintain the design thickness of the final surface course.
- (f) Construct the final tie-in to a length equal to the posted speed per 1 in. depth of the design thickness of the final course, with a length of at least 25 ft per 1 in. depth and a maximum length of 50 ft per 1 in. depth.

504.03.11 Mix Sampling & Testing. Mix sampling and testing for Quality Control (QC) is the responsibility of the Producer or Contractor. Identify the QC sampling locations in the Field QC Plan (plant or project site). Perform Quality Assurance (QA) sampling as directed and witnessed by the Administration. Obtain QA samples from behind the paver prior to compaction. The Administration will perform all QA testing.

- (a) **QC Sampling at the Plant.** Refer to MSMT 457. The Engineer will retain all random sampling documentation. The producer shall sample the mix at the plant. The sample shall be obtained or witnessed by the certified technician. QC plant mix sample results shall not be used in the pay factor calculation. Submit the results to the Administration and identify as Plant samples.
- (b) **QC Sampling at the Project Site.** Refer to MSMT 457. QC and QA samples shall not be split samples. The certified technician shall sample the mix at the project site. Sampling will be witnessed by the Administration.
 - (1) A mix lot constitutes all sublots of a mix created during the production of required tonnage for a lot.
 - (2) A mix subplot size should not exceed 1 000 tons.
 - (3) A subplot size up to 200 tons can be combined with the previous 1 000 ton subplot placed on the same day.
 - (4) A new lot number for a mix will be given when there is a change in the approved job mix formula.
 - (5) QC project site mix sample results may be used in the pay factor calculation.



(c) QA Sampling at the Project Site. Refer to MSMT 457. Sample mixes at the project site as specified.

- (1) Obtain the samples from behind the paver prior to compaction. Documentation of random sampling shall be retained by the Engineer.
- (2) The Contractor's Certified Technician shall sample the mix at the project site as witnessed by the Administration.
- (3) The Administration will take possession of the QA samples and deliver to the Laboratory for testing.
- (4) A mix subplot size should not exceed 1 000 tons. A subplot size up to 200 tons can be combined with the previous 1 000 ton subplot placed on the same day. A mix lot constitutes all sublots of a mix created during the production of required tonnage for a lot. A new lot number for a mix will be given when there is a change in the approved job mix formula.

(d) Mix Acceptance Determination. Obtain at least three behind the paver mix samples per acceptance lot for mix acceptance determination. An acceptance lot size is approximately equal to 6 000 tons of mix per project. A mix acceptance lot ends on the day when 6 000 tons is reached.

- (1) QC and QA results from behind the paver will be compared based on the F test and t test methods per MSMT 733 for each pay factor property.
- (2) When F test and t test method results indicate a QC and QA pay factor property is not from different populations, QC and QA results will be combined to calculate the mix pay factor property per MSMT 735 and 504.04.02.
- (3) When F test and t test method indicate a QC and QA pay factor property is from different populations, the pay factor property will be determined using QA results only.
- (4) The Administration will determine the acceptance evaluation procedure when less than three QA samples are obtained for an acceptance lot. The results will be made available within five working days.

504.03.12 Sampling & Testing for Density Determination. Refer to MSMT 457. Random core sampling locations will be selected for each subplot as specified. Sample the QC and QA cores in the presence of the Engineer. Cut four or six inch cores for mixes smaller than 25 mm and 6 in. cores for mixes 25 mm and larger.

A density lot is defined as a day's paving per mix. A subplot shall not exceed 500 tons. A paving day shall begin with a new lot and sublots. The Engineer shall witness the random



location coring. At the end of the day's paving, the Engineer will designate one randomly selected core subplot set for QC and one for QA. The Engineer will note specific reasons for any density waivers and submit the proper forms to the Administration.

- (a) **Quality Control for Density.** The density of the core samples will be expressed as a percentage of the maximum specific gravity of the mixture for each lot's placement. The maximum specific gravity will be determined in accordance with T 209 and the core's percent density will be expressed to the nearest 0.1 percent.

If more than one mix sample is obtained per day's placement, an average of all maximum specific gravity tests for the day will be used for the determination of percent density of each core sample. The QC Laboratory will make results of individual days paving available to the Engineer and the Contractor no later than the next working day. Retain core samples until notified of the results of the F& t test.

- (b) **Quality Assurance for Density.** The Engineer will take possession of the core samples and deliver the cores to the Administration's Laboratory for testing. The density of the core samples will be expressed as a percentage of the maximum specific gravity of the mixture for each lot's placement. The maximum specific gravity will be determined in accordance with T 209 and the core's percent density will be expressed to the nearest 0.1 percent.

- (c) **If more than one mix sample** is obtained per day's placement, an average of all maximum specific gravity tests for the day will be used for the determination of percent density of each core sample. The Laboratory will make results of individual days paving available to the Engineer and the asphalt Producer within five working days.

- (d) **Acceptance.** Each asphalt density lot will be evaluated for compliance using the Engineer's quality assurance test data and the Contractor's QC data. The QC and QA core specific gravity data will be analyzed in conformance with MSMT 733 (F test and t test method).

- (1) If test results are determined to be from the same population, QC and QA subplot results will be averaged to calculate the density pay factor in accordance with 504.04.02.
- (2) If results are determined not to be from the same population, the pay factor will be calculated using QA subplot results only. The average QC maximum specific gravity test results and the average project site behind the paver QA maximum specific gravity test results shall be compared.
- (3) If QC results and QA results compare within 0.026, the average of the combined QC and QA results shall be used to calculate each core density. If they do not compare within 0.026, QA maximum specific gravity results shall be used to determine each core density.



- (4) Pay reduction or incentive for the pavement compaction lot will be calculated in conformance with 504.04.02. Statistical outliers will be determined per MSMT 734.
- (5) An asphalt density lot size shall equal one paving day's production per mix. A lot shall be divided into a minimum of five equal sublots. A subplot shall not be greater than 500 tons. When a paving day's production per mix is greater than 2 500 tons, then each subplot size shall be 500 tons or fraction thereof.

Acceptance on projects requiring less than 500 tons of asphalt or when asphalt is used in non-traffic areas or on bridge decks will be determined with a thin layer density gauge used per the manufacturer's recommendations.

504.03.13 Thin Lifts and Wedge/Level Courses. If an asphalt course is determined to be a thin lift in accordance with the "Thin Lift Mix Design Identification Table" in 904.04.03, construct a 400 to 500 ft control strip on the first day of paving to determine optimum pavement density.

- (a) Use a thin-lift nuclear or non-nuclear asphalt density gauge in accordance with the manufacturer's recommendations to take readings from the control strip in five random locations to determine roller patterns and the number of passes needed to obtain optimum density. Optimum density is defined as when the average density does not change by more than 1.0 percent between successive roller passes and the percent density is between 90.0 and 97.0.
- (b) Core the five random gauge reading locations to verify the gauge calibration and to determine the percent pavement density. The cores will be tested by the contractor's QC laboratory and results will be verified by the Office of Materials Technology. The QC/QA cores will be saved by the contractor and made available to the Administration for retesting ten days past after the paving date or as directed.
- (c) On the first day of paving, the target optimum density will be determined using the density gauge readings from the control strip; verified by the core results. The lot average density from the five control strip cores will be used as the target optimum density.
- (d) Take a minimum of ten QC/QA gauge readings daily from random locations per day's paving per mix or two per 500 tons of paving per mix; whichever yields the higher frequency of locations. A density lot is defined as a day's paving per mix. A subplot shall not exceed 500 tons. A paving day shall begin with a new lot and sublots.
- (e) Any lot average 2.0 percent or more below optimum and below 92 percent shall require a new control strip to be constructed, tested and approved before paving continues.



- (f) Take 2 QA cores daily when production is in excess of 500 tons per location, or when successive days of less than 500 tons production totals 1 000 tons or greater. If the average of the two density gauge readings and the average of the two respective QA core densities are within 3.0 lb/ft³, the Administration will accept all the daily density gauge readings. If they do not compare within 3.0 lb/ft³, construct a new control strip and recalibrate the density gauge.
- (g) Wedge/Level courses placed at variable thicknesses and any area greater than 3/4 in. shall be tested and accepted in accordance with this Thin Lift specification. Incentives are not applicable for Thin Lift or Wedge/Level courses.

504.03.14 Control Strip. When mixes are not determined to be Thin Lifts per 504.03.12, use the option of constructing a control strip for guidance in determining roller patterns. Construct the control strip on the first workday in which asphalt is placed between 400 and 500 ft in length. Remove any control strip, if necessary and as determined at no additional cost. The construction a control strip may be required at any time during placement of asphalt based on the evaluation of compaction results, as determined.

504.03.15 Pavement Surface Checks. Ensure an approved 10 ft straightedge is available at all times. The surface of each pavement course shall be true to the established line and grade after final compaction of each course. The surface shall also be sufficiently smooth so that the surface does not deviate more than 1/8 in. when the straightedge is placed parallel to the centerline. The transverse slope of the finished surface of each course shall not deviate more than 3/16 in. when the straightedge is placed perpendicular to the centerline.

Check transverse joints using the straightedge immediately after the initial rolling. When the surface of each course varies more than 1/8 in. from true, make immediate corrections so the finished joint surface is within tolerance.

Areas that are tested and reported in accordance with the Pavement Surface Profile Specification are not applicable to 504.03.14.

504.03.16 Curbs, Gutters, Etc. Construct permanent curbs, gutters, edges, and other supports as shown and as specified, then backfill prior to placing the asphalt.

504.03.17 Shoulders. Construct shoulders as specified. Shoulders abutting the asphalt surface course of any two-lane pavement being used by traffic shall be completed as soon as possible after placement of the surface course on that lane.

504.03.18 Pavement Profile. Refer to Section 535.

504.04 MEASUREMENT AND PAYMENT. Asphalt pavement will be measured and paid for at the Contract unit price per ton. The payment will be full compensation for furnishing, hauling, placing all materials including anti-stripping additive, tack coat, control strip, pot hole and spall



repairs, setting of lines and grades where specified, and for all material, labor, equipment, tools, and incidentals necessary to complete the work.

Temporary Tie-Ins. Placement and removal of the temporary tie-in where asphalt is being applied to the traveled way carrying traffic will not be measured but the cost will be incidental to the pertinent asphalt item.

Removal of the existing pavement or structure for the final tie-in will be measured and paid for at the Contract unit price for the pertinent items used. The asphalt for the final tie-in will be measured and paid for at the Contract unit price for the pertinent Asphalt item.

Adjustments. Adjustment of existing visible manholes, valve boxes, inlets, or other structures will not be measured but the cost will be incidental to the asphalt item. Adjustment of existing manholes, valve boxes, inlets, or other structures that are encountered below the existing grade will be considered for payment in conformance with GP-4.07.

Removal of Existing Raised/Recessed Pavement Markers. Removal of existing raised/recessed pavement markers will not be measured but the cost will be incidental to the asphalt item. Removal of existing raised/recessed pavement markers that are encountered below the existing pavement will be considered for payment in conformance with GP-4.07.

504.04.01 Price Adjustment for Asphalt Binder. A Price Adjustment (PA) will be made to provide additional compensation to the Contractor or a credit to the Administration for the fluctuation in the cost of asphalt binder.

For adjustment purposes, the prevailing base index price will be the price specified for PG 64-22 (PG64S-22) at time of bid opening. Cost differentials between PG 64-22 (PG64S-22) and a binder specified shall be included in the price bid per ton for Asphalt. A historical database will be maintained by the Administration.

The PA will be made when the index price for the month of placement increases or decreases more than 5 percent of the prevailing base index price. Computations will be as follows:

$$\text{Percent Change} = ((P_p - P_b) / P_b) \times 100$$

$$PA = T \times Q \times ((P_p - (D \times P_b)))$$

Where:

- PA= Price Adjustment for the current month
- T = Design target asphalt content expressed as a decimal
- Q = Quantity of asphalt placed for the current month
- P_p = Index price for PG 64-22(PG64S-22) asphalt binder per ton for the month of placement
- D = 1.05 for increases over 5 percent; 0.95 for decreases over 5 percent
- P_b = Prevailing base index price for PG 64-22 (PG64S-22) asphalt binder per ton



PA resulting in increased payment to the contractor will be paid under the item Price Adjustment for Asphalt Binder. The item amount will be established by the Administration and shall not be revised by the Contractor. PA resulting in a decreased payment will be deducted from monies owed the Contractor.

504.04.02 Payment Adjustments for Asphalt Mix and Pavement Density. Payment adjustments for pavement density will be based on individual subplot core test data for a given lot and the lot average density as specified in this section and Table 504A. Payment reductions for density and for mix will be made by adjusting the payment for Asphalt. Incentive payments will be made using the Contract items for Asphalt Mix and Pavement Density. The item amounts established by the Administration shall not be revised. Payment reductions for density will be waived for portions of the pavement where a poor foundation is determined as the cause for inadequate density.

TABLE 504A		
Dense Graded Asphalt Mixes – Percent of Maximum Density		
<i>Lot Average % Minimum</i>	<i>No Individual Subplot Below %*</i>	<i>Pay Factor (DF)</i>
94.0	94.0	1.050
93.8	93.7	1.045
93.6	93.4	1.040
93.4	93.1	1.035
93.2	92.8	1.030
93.0	92.5	1.025
92.8	92.2	1.020
92.6	91.9	1.015
92.4	91.6	1.010
92.2	91.3	1.005
92.0	91.0	1.000
91.8	90.8	0.990
91.6	90.6	0.980
91.4	90.4	0.970
91.2	90.2	0.960
91.0	90.0	0.950
90.8	89.8	0.940
90.6	89.6	0.930
90.4	89.4	0.920
90.2	89.2	0.910
90.0	89.0	0.900
89.8	88.8	0.890
89.6	88.6	0.880
89.4	88.4	0.870



SPECIAL PROVISIONS INSERT
504 — ASPHALT PAVEMENT

CONTRACT NO. CO4125125
14 of 15

89.2	88.2	0.860
89.0	88.0	0.850
88.8	87.8	0.840
88.6	87.6	0.830
88.4	87.4	0.820
88.2	87.2	0.810
88.0	87.0	0.800
Less than 88.0	87.0	0.750 or rejected by Engineer

Note 1: Lots with test data above 97.0 may be rejected. Lots that are accepted will receive a pay adjustment in accordance with the following:

- (a) When the density lot average is above 97.5, the pay factor = 75%
- (b) When 3 subplot densities are above 97.0, the pay factor = 95%
- (c) When 4 or more subplot densities are above 97.5, the pay factor = 75%

Note 2: Pay incentive or pay disincentive will not be paid for placements identified as wedge/level courses or thin lift courses.

Note 3: When the Contractor's core specific gravity data does not compare with the Administration's core specific gravity data, only the Administration's single subplot values and lot average value will be used in acceptance decision.

Note 4: The average subplot values and the lot average will be used in acceptance decision.

Lots in conformance will be accepted per Sections 904, 915, and MSMT 735. A composite pay factor (CPF) for Asphalt content and gradation will be based on the total estimated percent of the lot that is within specification limits using the quality level analysis.

Payment adjustments will be computed as follows:

$$\begin{aligned} \text{Density Lot Payment Adjustment} &= (DF - 1) \times (AP) \times (TL) \\ \text{Mix Design Lot Payment Adjustment} &= (MF - 1) \times (AP) \times (TL) \end{aligned}$$

Where:

- MF = Mixture pay factor [0.55 + (0.5 x CMPWSL)]
Refer to MSMT 735 for CMPWSL.
- DF = Density pay factor from Table 504A.
- AP = Adjusted/applicable unit price per 504.04.01.
- TL = Applicable tonnage per lot.

- (a) A lot containing material with a pay factor of less than 1.000 may be accepted at the reduced pay factor if the pay factor is at least 0.800 and there are no isolated defects.
- (b) A lot containing material with a pay factor of less than 1.000 may be accepted at the reduced pay factor provided the composite pay factor for asphalt content and grading is at least 0.750, and there are no isolated defects.



- (c) A in-place density lot containing nonconforming material that fails to obtain at least a 0.800 pay factor and a mixture lot containing nonconforming material that fails to obtain at least a 0.750 pay factor for asphalt content and gradation will be evaluated to determine acceptance. Lots that are rejected shall be replaced.
- (d) Lots with less than five Quality Control or Quality Assurance samples per in-place density lot will not be evaluated for incentive payment.
- (e) When less than three mix samples have been obtained at the time of the acceptance sampling or at the time a lot is terminated, the Engineer will determine if the material in a shortened lot will be considered a part of the previous lot or whether it will be accepted based on the individual test data.

504.04.03 Dispute Resolution. Refer to 915.02.03.

CATEGORY 500
PAVING

SECTION 553 — LEAD FREE REFLECTIVE THERMOPLASTIC
PAVEMENT MARKINGS

553.01 DESCRIPTION. Prepare and apply 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. Refer to 549.03.01.

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 600 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 pressurized bead dispenser or other mechanical conveying method not dependent upon gravity for uniform application. The bead dispenser shall be equipped with an automatic cutoff system that will stop the flow of the thermoplastic material whenever there is a disruption in the application of the beads 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. Refer to 549.03.02.

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

Thermoplastic pavement markings shall be sprayed onto the pavement surface. Only the spray method of application shall be permitted. Gore areas, crosswalks, small intersections, roundabouts, and other areas which preclude the application of the markings with truck mounted equipment will be exempt from the spray application requirement.

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, and approved by the Engineer.
- (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 ft², as specified in MSMT 729.
- (e) **Color.** The color of the dry markings shall match Federal Standard 595 (13538 - yellow or 17886 - white). The Contractor shall supply the specified color chips for the Engineer's use to visually determine that the thermoplastic material matches the specified color.
- (f) **Retroreflectance.** Refer to MSMT 729. The millicandellas/lux/square meter values taken anytime within the first 30 days shall conform to the following:

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.** Refer to 549.03.01(a).

(h) **Alignment.** Refer to 549.03.01(a).

SPECIAL PROVISIONS
553 — LEAD FREE THERMOPLASTIC MARKINGS

CONTRACT NO. CO4125125
3 of 3

(i) **Layout Markings.** Refer to 549.03.01(a).

553.03.05 Quality Control Test Strip. Refer to 549.03.03.

553.03.06 Responsibility. Section 549.

553.03.07 Observation Period. Section 549.

553.04 MEASUREMENT AND PAYMENT. Refer to 549.04. The reflectometer will become the property of the Contractor at the completion of the project.

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:

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

- (a) The Engineer may require the Contractor to remove excess material thickness.
- (b) Removal of excess material and retracing pavement markings shall be performed at no additional cost to the Administration.

**CATEGORY 500
PAVING**

**SECTION 559 — PERMANENT PREFORMED PATTERNED
REFLECTIVE PAVEMENT MARKINGS**

559.01 DESCRIPTION. Furnish and apply permanent preformed patterned reflective pavement (PPPRP) markings.

559.02 MATERIALS.

Permanent Preformed Patterned Reflective Pavement Marking Materials	951.07
--	--------

559.03 CONSTRUCTION.

559.03.01 General. PPPRP markings shall be applied in conformance with the manufacturer’s recommendations or as directed by the Engineer.

On new hot mix asphalt projects, the PPPRP markings shall be inlaid into the hot surface of the top course of pavement. No top course paving shall be permitted unless the stripping crew and marking materials are at the project site.

When the Contract Documents specifies the use of PPPRP markings on concrete pavements or existing asphalt pavements, the Contractor shall use heat, solvent, or other type of adhesive primer in conformance with the manufacturer’s recommendations.

Preformed legends and symbols shall conform to the applicable shape and sizes as specified in the MdMUTCD, and Contract Documents.

PPPRP markings shall conform to pavement contours and be resistant to deformation by traffic and damage from snow removal equipment. Surface preparation, use of solvents and primers and equipment used in the application of PPPRP markings shall conform with the manufacturer’s recommendations and be approved by the Engineer. After PPPRP markings are applied, they shall be immediately ready for traffic.

559.03.02 Quality Assurance/Quality Control. Refer to 549.03.01.

559.03.03 Cleaning Pavement Surfaces. Refer to 549.03.02.

559.03.04 Application. Refer to 549.03.03 and the following:

(a) Manufacturer’s Recommendations. The Contractor shall provide a copy of the manufacturer’s recommendations to the Engineer, and shall follow them for the installation of the line markings.

(b) Adherence. Adherence of PPPRP markings shall be randomly checked by using a paint scraper or another approved tool, which shall be held nearly parallel with the highway surface, so there is no dislodging of the tape.

SPECIAL PROVISIONS

559 — PREFORMED PATTERNED REFLECTIVE MARKINGS

CONTRACT NO. CO4125125

2 of 3

- (c) **Thickness.** The finished thickness of the PPPRP markings shall have a minimum caliper of 0.060 in. at the thickest portion of the patterned cross section, and a minimum caliper of 0.020 in. at the thinnest portion of the cross section. Measurements shall be made from the top of finished pavement surface.
- (d) **Color.** The color of the markings shall match Federal Standard 595 (33538 - yellow, 37886 – white, or 37038 - black). The Contractor shall supply the specified color chips for the Engineer’s use to visually determine that the PPPRP markings match the specified color.
- (e) **Retroreflectance.** Refer to MSMT 729 and the following:

MINIMUM RETROREFLECTANCE

COLOR	RETROREFLECTIVITY	CORRECTIVE ACTION
White	350 or higher	None
Yellow	250 or higher	
White	less than 350	Necessary corrective actions, removal, replacement
Yellow	less than 250	

- (f) **Width.** Refer to 549.03.01(a).
- (g) **Alignment.** Refer to 549.03.01(a).
- (h) **Layout Markings.** Refer to 549.03.01(a).

559.03.05 Quality Control Test Strip. Refer to 549.03.03.

559.03.06 Responsibility. Section 549.

559.03.07 Observation Period. The Contractor shall be responsible for any defects in materials and workmanship of the PPPRP markings for a period of 180 days from the date the markings are applied and under traffic.

The Engineer will not assess time charges during the observation period provided all other work on the Contract is complete. At the end of the observation period, the Engineer will inspect the pavement marking for durability, color, reflectivity, and inform the Contractor of all pavement markings that have failed and require replacement. The pavement marking will be considered failed for any of the following conditions:

- (a) More than five percent of the substrate is exposed in any 2000 ft section of longitudinal pavement marking line.
- (b) Retroreflectance values have dropped below 300 mcd/L/m² for white or 220 mcd/L/m² for yellow.
- (c) Marking is discolored on a visual comparison with the color chips.

SPECIAL PROVISIONS

559 — PREFORMED PATTERNED REFLECTIVE MARKINGS

CONTRACT NO. CO4125125

3 of 3

The Contractor shall remove and replace all failed PPPRP markings within 30 days of receiving written notification from the Engineer at no additional cost to the Administration. Work shall be in conformance with the manufacturer's recommendation and as approved by the Engineer before the project is accepted. The replacement markings shall conform to the same requirements as the original markings. If the work is not completed in this period, the Engineer will resume time charges until this work is completed.

At the end of the observation period, the Engineer will accept the work and terminate the Contractor's responsibilities upon satisfactory inspection of the PPPRP markings.

559.04 MEASUREMENT AND PAYMENT. Measurement and payment for the pertinent Permanent Preformed Patterned Reflective Pavement Marking items will be as specified in 549.04. The reflectometer will become the property of the Contractor at the completion of the project.



If no distribution type is specified, then the Luminaire must have an IESNA Type III distribution. LED Roadway Luminaires shall meet the requirements of a Full Cutoff distribution as defined by IESNA. For 480 volt operation, an integral transformer shall be provided to reduce the voltage.

ADD: The following after the last sentence in the paragraph for **Testing**.

The Administration may waive the requirements of section 820.03.02 (d) for illuminance testing.

806.04 MEASUREMENT AND PAYMENT.

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

LED Roadway Luminaires will be measured and paid for at the contract unit price per each. The payment will be full compensation for the LED Roadway Luminaire and drivers, mounting hardware, wiring, integral transformer, shorting cap, and all material, labor, equipment, tools, and incidentals necessary to complete the work.



**CATEGORY 900
MATERIALS**

655 **ADD:** The following after the last paragraph of 900.02 TECHNICIAN QUALIFICATION REQUIREMENTS.

900.03 RECYCLED MATERIALS.

900.03.01 CERTIFICATION. All recycled or rehandled material furnished or supplied for use may require testing and certification to ensure compliance with all State and local applicable environmental and EPA regulations. The required testing may include, but not be limited to, the EPA Toxicity Characteristic Leaching Procedure (TCLP) or its successor. Provide testing and certification for all recycled materials at no additional cost to the Administration. Evaluation and interpretation of the test data will be made by an OMT Quality Assurance Manager. The above requirements do not preclude the normal materials acceptance process, and the recycled material shall meet all applicable specifications. EPA regulations governing the use of the material, certified test results, and material safety data sheets shall accompany the source of supply letter and sample submitted for approval.

Only highway demolition materials are to be used in constructing RC stockpiles for Administration projects. The use of building materials is prohibited.

Refer to the Contract Documents for recycled materials not covered by this specification.

900.03.02 RECLAIMED/RECYCLED CONCRETE (RC).

Usage. Use RC for the following with written approval.

- (a) Graded Aggregate Base (GAB).
- (b) Common, Select, or Modified Borrow.
 - (1) At least 2 ft above saturated soil or groundwater conditions, as determined.
 - (2) At least 100 ft from surface waters (streams, creeks, or rivers, ponds and lakes),
 - (3) At least 3 ft from exposed metal surfaces, and,
 - (4) At least 3 ft from geotextile.
 - (5) At least 3 ft from any water discharge locations.



Do not use RC as Capping Borrow nor as aggregate for the following.

- (a) Portland cement concrete.
- (b) Hot mix asphalt.
- (c) Drainage systems.
- (d) Mechanically stabilized earth (MSE) systems.
 - (1) MSE walls.
 - (2) Reinforced soil slopes (RSS).
 - (3) Reinforced earth slopes (RES).
- (e) In embankment construction as follows.

Within 1.5 ft of the top surface of any area to be vegetated.

- (1) Within 2 ft of saturated soil or groundwater conditions, as determined.
- (2) Within 100 ft of any surface water course (streams, creeks, or rivers, ponds and lakes).
- (3) Within 3 ft of any metal pipe or shoring.
- (4) Within 3 ft of any water discharge locations.
- (5) Under permeable or porous surfaces.

Grading Requirements. The grading requirements for the use of RC.

- (a) Table 901 A when used as GAB or for any other application within the pavement structure.
- (b) 204.02 when used in embankment construction.
- (c) 916.01 when used as Borrow material.

RC shall not contain more than 5 percent brick and hot mixed asphalt material by mass except when used as Common Borrow.



pH Requirements. RC pH shall be less than 12.4 for all applications. RC usage shall not cause any outfall and infiltration water leaving the site to exceed a pH of 8.5. Acid sulfate, sulfur or any other environmentally safe organic material may also be used to control the pH.

pH Testing.

- (a) **Plant:** The producer is required to test pH at the plant per T 289 every 1,000 tons shipped or once a day, whichever yields the greater frequency. Plant pH testing shall be recorded as specified and a history shall be kept at the producer's laboratory. The producer may be required to present TCLP and any other tests conducted by an independent laboratory as directed.

The Administration reserves the right to test the producer's RC at the plant for pH. Material delivery may be terminated if the test results repeatedly meet or exceed a pH of 12.4. In case of high pH the producer is required to use shorter stock pile by spreading the material at around the plant or mixing the RC-GAB with the natural GAB to reduce the pH issue.

- (b) **Construction Site:** The OMT representatives will perform QA testing to monitor, test, for the pH levels for any discharge associated with RC placement as directed. This includes monitoring and testing during periods of precipitation or dampness. In cases of high pH, the producer shall provide a reduction control plan for the pH.

Quality Control. The producer shall submit a Quality Control Plan and obtain approval prior to production. The plan shall include, but not be limited to, the operational techniques and procedures proposed to produce the RC product. Quality control includes the sampling, testing and data recording performed to validate the quality of the product during production operations.

Quality Assurance. OMT Quality Assurance personnel will perform quality assurance inspection, sampling, and testing at the RC plant and construction site. Additional inspection, testing and compaction control will be performed by the Project Engineer.

900.03.03 RECYCLED ASPHALT PAVEMENT (RAP).

Usage. Use RAP for Common, Select, Capping, or Modified Borrow.

Do not use RAP as aggregate for the following.

- (a) Graded Aggregate Base (GAB).



(b) Portland cement concrete.

(c) Drainage systems.

(d) Embankment construction.

(1) Within 1 ft of the top surface of any area to be vegetated.

Refer to MSMT 412 and M 323 for the use of RAP in hot mix asphalt mixes.

Grading Requirements. The grading requirements for the use of RAP.

(a) 204.02 when used in embankment construction,

(b) 916.01 when used as Borrow material,

(c) 901.02.01 when used as riprap.

Quality Control. Create a captive stockpile for storing the RAP prior to use. Create a new captive stockpile and take new acceptance samples for gradation approval whenever the source of the RAP changes.

Quality Assurance. OMT Quality Assurance personnel will sample and test the RAP stockpiles to ensure that they meet the above gradation requirements. The completed test results will be reviewed by the OMT Soils and Aggregate Division for approval.

Construction of Control Test Strip. The location, equipment, and methods used to construct the control test strip shall be as directed; prior to approval. The equipment and methods used to construct the control test strip shall be the same as those used in subsequent construction. Place and test the control test strip when the RAP is 32°F or higher to establish the maximum density. RAP is temperature sensitive, which may affect the density.

Construct the control test strip that shall be at least 100 ft long, 12 ft wide and a maximum compacted lift thickness of 6 in. Prepare the subgrade for the control test strip in accordance with 204.03.07. Do not construct the control strip, or perform any subsequent construction, on frozen subgrade.

Compact the RAP for the control test strip with one pass of the roller. Measure the density after one pass with a nuclear density gauge (backscatter method) at the frequency for capping material at five random locations distributed across the length and width of the control test strip, as directed. Record the measurements and mark the locations for future reference.



Compact the RAP for the control test strip with a second pass of the roller. Measure and record the density again at the exact locations previously tested and as described above. Prepare a plot of density versus the number of roller passes. Continue this process until the maximum dry density of the control strip is established.

There should be no drop in average density during construction of the control test strip for each lift. A drop in the average density of greater than 2 pcf during construction of the control test strip is an indication that the material is not properly compacting, and a new test strip shall be constructed.

The Project Engineer may require the Contractor to cut into the control test strip for visual inspection. All material, labor, equipment, tools, and incidentals necessary to provide an approved control test strip shall be at no additional cost to the Administration.

Compaction Control. Use the roller pattern and number of passes determined from the construction of the test strip to compact the RAP for production placement. The density of the RAP compacted for production work shall be at least 97 percent of the maximum density obtained from the control test strip. Recheck the density of the production work if it is less than 97 percent of the maximum density obtained from the control test strip. Construct a new control test strip if the second density does not meet the 97 percent requirement. Construct a new control test strip if the measured density of the compacted RAP for production work exceeds 105 percent.

Establish one rolling pattern to achieve maximum density for each use based on the control test strips. Samples or results produced prior to the construction of any new stockpiles will not be considered.



CATEGORY 900
MATERIALS

SECTION 901 — AGGREGATES

655 **DELETE:** 901.01 - Tables 901 A, 901 B, 901 C, and 901 D in their entirety.

INSERT: The following.



SPECIAL PROVISIONS INSERT
901 — AGGREGATES

TABLE 901 A
AGGREGATE GRADING REQUIREMENTS
TEST METHOD T 27

MATERIAL		SIEVE SIZE															
		2-1/2"	2"	1-1/2"	1"	3/4"	1/2"	3/8"	No. 4	No. 8	No. 10	No. 16	No. 30	No. 40	No. 50	No. 100	No. 200
		63 mm	50 mm	37.5 mm	25 mm	19 mm	12.5 mm	9.5 mm	4.75 mm	2.36 mm	2.0 mm	1.18 mm	600 μm	425 μm	300 μm	150 μm	75 μm
CRUSHER RUN AGGREGATE CR-6 (f)(g)		—	100	90-100	—	60-90	—	—	30-60	—	—	—	—	—	—	—	0-15
BANK RUN GRAVEL — SUB-BASE		100	—	—	90-100	—	60-100	—	—	35-90	—	—	20-55	—	—	—	5-25
GRADED AGGREGATE — BASE DESIGN RANGE (a)		—	100	95-100	—	70-92	—	50-70	35-55	—	—	12-25	—	—	—	—	0-8
TOLERANCE (b)		—	-2	±5	—	±8	—	±8	±8	—	—	±5	—	—	—	—	±3(c)
BANK RUN GRAVEL — BASE		100	—	—	85-100	—	60-100	—	—	35-75	—	—	20-50	—	—	—	3-20
COARSE AGGREGATE - PORTLAND CEMENT CONCRETE	57 and UNDERDRAIN (h)	—	—	100	95-100	—	25-60	—	0-10	0-5	—	—	—	—	—	—	—
	67	—	—	—	100	90-100	—	20-55	0-10	0-5	—	—	—	—	—	—	—
	7	—	—	—	—	100	90-100	40-70	0-15	0-5	—	—	—	—	—	—	—
FINE AGGREGATE — PORT- LAND CEMENT CONCRETE, UNDERDRAIN, and PNEUMATIC MORTAR (d)		—	—	—	—	—	—	100	95-100	—	—	45-85	—	—	5-30	0-10	—
COARSE AGGREGATE — LIGHTWEIGHT PORTLAND CEMENT CONCRETE		—	—	—	100	90-100	—	10-50	0-15	—	—	—	—	—	—	—	—
FINE AGGREGATE — LIGHTWEIGHT PORTLAND CEMENT CONCRETE (d)		—	—	—	—	—	—	100	85-100	—	—	40-80	—	—	10-35	5-25	—
FINE AGGREGATE/SAND MORTAR and EPOXIES (d)		—	—	—	—	—	—	—	100	95-100	—	—	—	—	—	0-25	0-10
MINERAL FILLER		—	—	—	—	—	—	—	—	—	—	100	—	95-100	—	70-100	—



*Maryland Department of Transportation
State Highway Administration*

SPECIAL PROVISIONS INSERT

901 — AGGREGATES

CONTRACT NO. CO4125125

3 of 6

- (a) To establish target values for design.
- (b) Production tolerance.
- (c) ± 2 for field grading (omitting T 11).
- (d) Fine aggregate includes natural or manufactured sand.
- (e) Crushed glass shall not contain more than one percent contaminants by weight.
- (f) Not to be used in the structural part of any Administration project.
- (g) Recycled asphalt pavement may be used as a component not to exceed 15 percent and is not subject to aggregate physical property requirements in TABLE 901 B.
- (h) Recycled concrete is prohibited in drainage applications.



TABLE 901 B

AGGREGATE PHYSICAL PROPERTY REQUIREMENTS

MATERIAL	TEST METHOD				
	S P E C I F I C A T I O N	T 90	T 11	T 96	T 104
		PI	MATERIAL FINER THAN No. 200 SIEVE	LOS ANGELES ABRASION	SODIUM SULFATE SOUNDNESS
	max	% max	% max	% max	
CRUSHER RUN AGGREGATE CR-6	D 1241(a)	6	—	50	—
BANK RUN GRAVEL — SUBBASE	D 1241	6	—	50	—
GRADED AGGREGATE — BASE	D 1241	6	—	50	—
BANK RUN GRAVEL — BASE	D 1241	6	—	50	—
COARSE AGGREGATE — PCC (b)	M 80 CLASS A	—	1.0(c)	50	12
FINE AGGREGATE — PCC (b)(d)	M 6 CLASS B	—	4.0(e)	—	10
COARSE AGGREGATE — LIGHTWEIGHT PCC	M 195	—	—	—	—
FINE AGGREGATE — LIGHTWEIGHT PCC (f)	M 195	—	—	—	—
FINE AGGREGATE/SAND MORTAR and EPOXIES	M 45	—	—	—	10
MINERAL FILLER (g)	M 17	4	—	—	—
GLASS CULLET (h)	M 318	—	—	—	—

- (a) Other approved inert materials of similar characteristics may be used provided they meet these provisions. For crushed reclaimed concrete, the soundness loss shall not exceed 18 percent after magnesium sulfate testing as specified in T 104.
- (b) Test coarse and fine aggregate for PCC for alkali silica reactivity (ASR) per MSMT 212.
- (c) 1.5 if material passing No. 200 sieve is dust of fracture, free of clay or shale.
- (d) In areas exposed to traffic, manufactured sand shall have a minimum ultimate Dynamic Friction Value (DFV) of 45, based on the parent rock.
- (e) 5.0 for concrete not subject to surface abrasion.
- (f) Fine aggregate meeting M 6 may be used if the lightweight concrete does not exceed the maximum unit weight specified in the Contract Documents.
- (g) Fly ash shall not exceed 12 percent loss on ignition.
- (h) For use as a granular road base material. Not intended for use in locations where surfacing will not be placed over the base.



SPECIAL PROVISIONS INSERT
901 — AGGREGATES

TABLE 901 C
ASPHALT MIXES
AGGREGATE GRADING REQUIREMENTS, % PASSING FOR MIX DESIGN
TEST METHOD T 27

MATERIAL		SIEVE SIZE									
		3/4in.	1/2in.	3/8in.	No. 4	No. 8	No. 16	No. 30	No. 50	No. 100	No. 200
		19.0 mm	12.5 mm	9.5 mm	4.75 mm	2.36 mm	1.18 mm	600 µm	300 µm	150 µm	75 µm
GAP GRADED STONE MATRIX ASPHALT MIX - 9.5mm		100	100	75-90	30-50	20-30	—	—	—	—	8-13
GAP GRADED STONE MATRIX ASPHALT MIX - 12.5mm		100	90-99	70-85	28-40	18-30	—	—	—	—	8-11
GAP GRADED STONE MATRIX ASPHALT MIX - 19.0mm		100	82-88	60 max	22-30	14-20	—	—	—	—	9-11
OPEN GRADED FRICTION COURSE – 9.5mm (a)		—	100	85-100	20-40	5-10	—	—	—	—	2-4
OPEN GRADED FRICTION COURSE – 12.5 mm (a)		100	85-100	55-75	15-25	5-10	—	—	—	—	2-4
OPEN GRADED FRICTION COURSE – 12.5mm (b)		100	80-100	35-60	10-25	5-10	—	—	—	—	1-4
SLURRY SEAL (SS) AND MICRO -SURFACING (MS)	TYPE II	—	—	100	90-100	65-90	45-70	30-50	18-30	10-21	5-15
	TYPE III	—	—	100	70-95	45-70	28-50	19-34	12-25	7-18	5-15
CHIP SEAL SURFACE TREATMENT	7	100	90-100	40-70	0-15	0-5	—	—	—	—	—
	8	—	100	85-100	10-30	0-10	0-5	—	—	—	—

(a) Less than Design Level 4 (ESAL)
(b) Porous European Mix (PEM) – Design Level 4 (ESAL)



TABLE 901 D

AGGREGATE PHYSICAL PROPERTY REQUIREMENTS FOR ASPHALT MIXES

MATERIAL	S P E C I F I C A T I O N	TEST METHOD					
		T 11	T 96	T 104	D 4791	MSMT 216	T 279
		MATERIAL FINER THAN No. 200 SIEVE % max	LOS ANGELES ABRASION (LA) % max	SODIUM SULFATE SOUNDNESS % max	FLAT and ELONGATED (a) (h) % max	DFV (e) min	BPN (e) min
4.75mm, 9.5mm, 12.5mm, and 19.0mm	M323	—	45	12	10	25 (b)	—
4.75mm, 9.5mm, 12.5mm, and 19.0mm - HDFV	M323	—	45	12	10	45 (e)	—
25.0mm and 37.5mm	M323	—	45	12	10	—	—
GAP GRADED STONE MATRIX ASPHALT — 9.5mm, 12.5mm, and 19.0mm	M323	—	30	12	20/5 (g)(i)	45 (e)	—
OPEN GRADED FRICTION COURSE 9.5 mm, 12.5 mm, 12.5 mm PEM (j)	MSMT 409	0.5	30	12	20/5 (g)(i)	45 (e)	—
SLURRY SEAL (SS) and MICRO-SURFACING (MS)	—	—	—	12	—	45 (f)	16
CHIP SEAL SURFACE TREATMENT	M 80, CLASS A	1.0 (d)	45	—	—	—	—

- (a) Dimensional ratio of calipers shall be 5:1.
- (b) Dynamic Friction Value (DFV) shall be 30.0 when any aggregate being blended has a DFV less than 25.0. DFV shall be 25.0 or greater when the aggregate from each source has a DFV of 25.0 or greater. Determine proportions of blended aggregate under MSMT 416. Not applicable for Gap Graded Stone Matrix surface mixes or any other surface mix requiring high polish aggregate.
- (c) DFV and British Pendulum Number (BPN) determined on parent rock. Reclaimed asphalt pavement (RAP) shall have a DFV of 30.0.
- (d) 1.0 for samples taken at the point of production. Samples taken at any point after shipment shall have no more than 1.5 percent finer than 0.075 mm sieve.
- (e) DFV shall be 50 when any aggregate being blended has a DFV less than 45. DFV shall be 45 when the aggregate from each source has a DFV of 45 or greater. Carbonate rock shall have a minimum of 25 percent insoluble residue retained on the 0.075 mm sieve
- (f) No blending allowed.
- (g) Dimensional ratio of calipers shall be 3:1/5:1.
- (h) Testing for flat and elongated particles shall be conducted on the blend.
- (i) Test conducted on particles retained on the 4.75 mm sieve.
- (j) Porous European Mix



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

1 of 9

CATEGORY 900
MATERIALS

SECTION 904 — PERFORMANCE GRADED
ASPHALT BINDERS AND ASPHALT MIXES

683 **DELETE:** SECTION 904 — PERFORMANCE GRADED ASPHALT BINDERS AND HOT MIX ASPHALT.

INSERT: The following.

SECTION 904 — PERFORMANCE GRADED
ASPHALT BINDERS AND ASPHALT MIXES

904.01 CERTIFICATION. The manufacturer and hauler shall furnish certifications as specified in TC-1.03 and the following:

The manufacturer shall certify:

- (a) Date and time of loading.
- (b) Tank or blending system.
- (c) Identification of hauling unit.
- (d) Binder grade, temperature, and quantity of materials.
- (e) Complete certified analysis.
- (f) Lot number, if applicable.

The hauler shall certify:

- (a) Identification of hauling unit.
- (b) Binder grade and source of last delivery.
- (c) The date of the last delivery using this hauling tank and volume of material remaining in the tank at the time of current loading.

904.02 PERFORMANCE GRADED ASPHALT BINDERS. M332 Table 1, for mixes containing all virgin materials, recycled asphalt pavement materials, or roofing shingles from



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

2 of 9

manufacturing waste. The Office of Materials Technology's (OMT) Asphalt Technology Division (ATD) will approve all PG binders. Submit certification from an approved supplier per M332 showing the final product meets specifications.

Chemical or organic additive suppliers shall supply the dosage rate and provide certification of the resultant PG binder.

The PG binder for asphalt mixes shall be achieved by the use of Neat Asphalt with elastomer polymer modifications when needed. Modifications to PG binder shall be as approved.

902.02.01 Warm Mix Asphalt (WMA) PG Binders. Include the PG binder performance grade test data over the range of WMA additive percentages proposed for WMA use. An AASHTO accredited laboratory shall be employed to perform all required WMA binder laboratory testing.

904.03 EMULSIFIED ASPHALTS. M140 or M208, and M316 with the following exceptions:

- (a) Cement mixing tests are waived.
- (b) Maximum of 3.0 percent by volume of oil distillate.
- (c) The sieve test requirement for field samples shall be a maximum of 0.4 percent.

904.04 ASPHALT MIXES. Section 915. Asphalt mixes shall be produced as specified.

904.04.01 Aggregates. M323 and Section 901. Test the aggregate retained on the 4.75 mm sieve for flat and elongated particles per D4791. Recycled asphalt pavement used in an asphalt mix shall be considered an aggregate source per 900.03.

904.04.02 Mix Design. Develop asphalt mix designs in conformance with R35, M323 and MSMT 416, except replace "Table 6, Superpave HMA Design Requirements" in M323 with the following:



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

3 of 9

DESIGN LEVEL	20-Year Design Traffic, ESALs	N_{design}
1	<300,000	50
2	300,00 to <3,000,000	65
3	3,000,000 to <10,000,000	80
4	10,000,000 to <30,000,000	80
5	≥30,000,000	100

Design asphalt mixes for the Equivalent Single Axle Loading (ESAL) range specified.

Asphalt mixes designed with Reclaimed Asphalt Pavement (RAP) and/or Reclaimed Asphalt Shingles (RAS) shall also conform to MSMT 412.

904.04.03 Mix Design Approval. Submit data from the laboratory study to OMT for tentative approval at least 30 days prior to paving operations. Submit mix designs in an approved format. Include the following:

- (a) Mix designation.
- (b) Source, percentage, and grade of performance graded asphalt binder.
- (c) Source, gradation, and proportion of each component aggregate.
- (d) Target aggregate gradation.
- (e) Plant where the asphalt mix will be produced.
- (f) Plant target mixing temperature based on viscosity of 0.22 Pa·s.
- (g) Ratio of dust to binder material on effective asphalt.
- (h) Maximum specific gravity at the target binder content.
- (i) Mix design grading plotted on 0.45 power gradation chart.



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

4 of 9

- (j) Tensile strength ratio and worksheets.
- (k) The bulk specific gravity and gyratory weight at Ndesign gyrations.
- (l) The air void content (percent Va) at N Design gyrations.
- (m) The voids in the mineral aggregate (percent VMA) and the voids filled with asphalt (percent VFA) at N Design gyrations (T 312).
- (n) All consensus and source properties.
 - (1) Coarse aggregate angularity.
 - (2) Flat and elongated.
 - (3) Sand equivalent.
 - (4) Uncompacted void content of fine aggregate.
 - (5) Bulk and apparent specific gravity of coarse and fine aggregate.
 - (6) Absorption of coarse and fine aggregate.

Include the quantity of job mix formula aggregate and appropriate amount of required PG binder for ignition oven calibration with each mix design submitted for approval.

When previous construction or performance experience has shown the proposed mix design to be unsatisfactory, OMT may require submission of a more suitable design.

- (a) When a change to the source of aggregate used in the mix is proposed, submit a revised mix design as specified.
- (b) Notify OMT two working days in advance if a change in the PG binder source becomes necessary.
- (c) Conduct a stripping test per MSMT 410 and submit an initial PG binder sample for testing and approval. OMT may require an anti-stripping additive test per D4867 before approval.

904.04.04 WMA Mix Design Approval. 904.04.03 and the following:

- (a) Warm Mix technology and/or additive information.



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

5 of 9

- (b) WMA manufacturer's established target rate for water and additives and the acceptable variation for production.
- (c) Producer's compaction temperature of gyratory specimens.
- (d) The producer shall follow the manufacturer's recommendation for incorporating additives and WMA technologies into the mix per the manufacturer's recommendations.

When a foaming, chemical or organic additive is used, submit the appropriate job mix formula (JMF) per R35 for approval.

- (a) All WMA technology methods shall require a mix design/field placement demonstration on a non-Administration project once the JMF is approved and before verification, or as approved. Notify OMT two working days prior to shipment.
- (b) A technical representative from the product supplier must be present during the initial shipment and placement of the WMA when a chemical or organic additive is used.
- (c) If all specification requirements are met, this is a one-time demonstration per product, per plant, or with a combination of products.
- (d) The demonstration may be waived if the asphalt producer has successfully placed WMA on other projects with the same aggregates and can provide testing data and contact information.

904.04.05 Verification of Mix Design. Conduct a verification of the mix at the beginning of production in each plant after receiving tentative approval for the design.

- (a) Notify the Engineer and OMT at least two working days in advance of the scheduled verification. Verification shall be performed by certified personnel per 504.03.
- (b) Prepare the verification samples per R35. All verification samples will be split with the OMT laboratory.
- (c) Compare and evaluate the verification test results per MSMT 735.

904.04.06 Verification Evaluation. MSMT 735.

- (a) Initial verification consists of four split samples tested as specified. Begin random sampling with the first day's production, with at least one split sample witnessed by an OMT representative.



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

6 of 9

- (b) If the first day of production is less than 2 000 tons, verification testing may be spread over no more than five working days with production of 200 tons or more. Complete verification testing no later than the fifth working day with production in excess of 200 tons or on the day when production has reached 2 000 tons, whichever occurs first.
- (c) Production may proceed without any changes when the Contractor’s and Administration’s test results conform to a Percent within Specification Limit (PWSL) of at least 85. If the mixes submitted have identical aggregate combinations and differing asphalt contents associated with changes in ESAL loads, verification may be limited to volumetric analysis, as determined.
- (d) If all test results do not conform to the parameters with a PWSL of at least 85, then an adjustment to the asphalt content or gradation may be made to bring the mix design requirements within acceptable levels. Permissible adjustment limitations between the approved Mix Design and Adjusted Mix Design are as follows:

TEST PROPERTY	PERMISSIBLE ADJUSTMENT % (*)
Larger than 1/2 in. (12.5 mm) sieve	± 5
1/2 in. (12.5 mm) thru No. 4 (4.75 mm) sieves	± 4
No. 8 (2.36 mm) thru No. 100 (1.50 μm) sieves	± 3
No. 200 (75 μm) sieve	± 1.0
Binder Content	± 0.20

*The permissible adjustment for all mixes shall be within control points

- (e) Perform a second verification to ensure that the modified mix conforms to all design requirements when an adjustment outside the permissible adjustment percentage is made to the mix design. Conform to the time and tonnage limitations as specified. Production may proceed when the adjusted mix is within control points and meets the PWSL. Suspend mix production and submit a new mix design for approval if the mix does not meet specifications. Design the new mix as specified.
- (f) Suspend mix production if subsequent designs submitted due to nonconformance do not meet specifications during the initial verification until corrective action is taken, as approved.



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

7 of 9

If an adjustment to a verified mix is necessary due to aggregate changes, the mix design must meet all specification requirements before a new mix design number is issued. Verification will be based on the last 4 QA and QC production samples.

904.04.07 Thin Lifts. As specified in 504.03.12. Lift thicknesses shall be designated as thin lifts when the lift thickness specified does not meet 3-times nominal maximum aggregate size for fine graded mix designs or 4-times nominal maximum aggregate size for coarse graded mix designs.

Determine fine and coarse graded thin lift mix designs per M 323 and in accordance with the table below.

Thin Lift Mix Design Identification Table

Mix Designation	Gradation Classification	
	Control Sieve Mix Design Target (%Passing)	
	Fine Graded	Coarse Graded
4.75mm	A thin lift is a specified pavement thickness < 1 inch.	A thin lift is a specified pavement thickness < 1 inch.
9.5mm	When the 2.36mm (#8) is $\geq 47\%$, a thin lift is a specified pavement thickness < 1 1/8 inches	When the 2.36mm (#8) is < 47%, a thin lift is a specified pavement thickness < 1 1/2 inches
12.5mm	When the 2.36mm (#8) is $\geq 39\%$, a thin lift is a specified pavement thickness < 1 1/2 inches	When the 2.36mm (#8) is < 39%, a thin lift is a specified pavement thickness < 2 inches
19.0mm	When the 4.75mm (#4) is $\geq 47\%$, a thin lift is a specified pavement thickness < 2 1/4 inches	When the 4.75mm (#4) is < 47%, a thin lift is a specified pavement thickness < 3 inches
25.0mm	When the 4.75mm (#4) $\geq 40\%$, a thin lift is a specified pavement thickness < 3 inches	When the 4.75mm (#4) < 40%, a thin lift is a specified pavement thickness < 4 inches
37.5mm	When the 9.50mm (3/8) $\geq 47\%$, a thin lift is a specified pavement thickness < 4 1/2 inches	When the 9.50mm (3/8) < 47%, a thin lift is a specified pavement thickness < 6 inches

904.04.08 Anti-stripping Additives. D4867. Asphalt mixes shall have a Tensile Strength Ratio (TSR) of at least 0.85.

- (a) The freeze-thaw conditioning cycle is required. OMT testing of TSR's will be performed randomly.



SPECIAL PROVISIONS INSERT
904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

CONTRACT NO. CO4125125

8 of 9

- (b) Asphalt mixes not meeting the minimum TSR require the use of an approved anti-stripping additive.
- (c) The producer shall determine the exact quantity of anti-stripping additive required per D4867 based on a minimum TSR of 0.85.
- (d) The dosage rate when a heat stable anti-stripping additive is used shall be at least 0.20 percent of the total weight of asphalt. The additive shall be introduced by the PG binder supplier or at the plant by line blending, metering, or otherwise measuring to ensure accurate proportioning and thorough mixing.
- (e) Hydrated lime (when used) shall conform to C 1097. Add hydrated lime in slurry form at the rate of 1.0 to 1.5 percent by weight of total aggregate. The lime slurry shall be sprayed uniformly on the aggregate on the feed belt prior to entry into the asphalt plant dryer.
- (f) Plant control and acceptance of the mix will be based on MSMT 410 per its stripping potential.

904.04.09 Plant Control. The following tolerances shall apply:

TABLE 904 A – DENSE-GRADED MIX TOLERANCES

PHYSICAL PROPERTIES	PLANT	PROJECT SITE
	Site or Hauling Unit Samples	Behind the Paver Samples
Passing No. 4 (4.75 mm) sieve and larger, %	± 7	± 7
Passing No. 8 (2.36 mm) thru No. 100 (150 µm) sieve, %	± 4	± 5
Passing No. 200 (75 µm) sieve, %	± 2	± 2
Asphalt content, %	± 0.4	± 0.5
Ratio of dust to binder material	0.6 to 1.6 (a)	0.6 to 1.6 (a)
Mix temperature leaving plant vs. mix design temperature, F	± 25	NA
Deviation of maximum specific gravity per lot versus design maximum specific gravity	± 0.030	± 0.040
Voids, total mix, (VTM), %	4.0 ± 1.2	4.0 ± 1.2
Voids, total mix, 4.75 mm mix (VTM), %	3 ± 2	3 ± 2
Voids in mineral aggregate, (VMA), %	± 1.2 from design target	± 1.2 from design target
Voids filled asphalt (VFA), %	Within spec	Within spec
Bulk specific gravity, Gmb, %	± 0.022	± 0.022

(a) Not applicable to 4.75 mm.



SPECIAL PROVISIONS INSERT

CONTRACT NO. CO4125125

904 — PERFORMANCE GRADED ASPHALT BINDERS
AND ASPHALT MIXES

9 of 9

904.04.10 PWSL Computations. As specified in 504.04.02. Perform PWSL computations for maximum specific gravity, voids in the total mix, voids in the mineral aggregate, and voids filled with asphalt. Use the moving average of the last three consecutive test values for each parameter.

- (a) If the PWSL for the three test values falls below 85, take corrective action to bring the PWSL to at least 85.
- (b) If the PWSL drops below 68, production shall be suspended until corrective action is taken as approved.



**CATEGORY 900
MATERIALS**

SECTION 905 – PIPE

694 **DELETE:** Sections 905.01 and 905.02 in their entirety.

INSERT: The following.

905.01 CERTIFICATION. Furnish certification for pipe as specified in TC-1.03.

MATERIAL	SPECIFICATION	REMARKS
Nonreinforced Concrete Pipe	M 86, Class 3	–
Reinforced Concrete Pipe	M 170, Class 4 and 5	60 in. and smaller diameter, Load bearing option. Larger than 60 in. diameter, Material option.
Reinforced Concrete Elliptical Pipe	M 207, Class 4, Horizontal installation only	60 in. and smaller equivalent diameter, Load bearing option. Larger than 60 in. equivalent diameter, Material option.
Concrete End Sections	M 170	Class 3 pipe reinforcement required
Reinforced Concrete Arch Culvert	M 206	–
Concrete Drain Tile	M 178	–
Non-Asbestos Fiber-Cement Storm Drain Pipe	C 1450	–
Reinforced Concrete Low-Head Pressure Pipe	C 361	–
Corrugated Polyethylene Pipe	M 294	–
Corrugated Polyethylene Drainage Pipe	M 252	Perforated underdrain and underdrain outlet pipe.
Corrugated Polypropylene Drainage Pipe	MP 21	–
Polyvinyl Chloride (PVC) Profile Wall Pipe	M 304	–
Polyvinyl Chloride (PVC) Pipe	M 278	Underdrain outlet pipe
	M 278 (a)	Perforated underdrain
Joints for Concrete Pipe and Manholes Using Rubber Gaskets	C 443	–
Joints for Concrete Pipe, Manholes and Precast Box Sections Using Preformed Flexible Joint Sealants	C 990	Not for use with circular pipe
Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals	D 3212	
Corrugated Steel Pipe, Pipe Arches and Underdrain	M 36 (b), (c)	End finish shall be annular corrugations
Corrugated Aluminum Alloy Pipe	M 196 (b)	End finish shall be annular corrugations
Structural Plate for Pipe, Pipe Arches and Arches	M 167	–
Copper Pipe	Fed Spec WW – T-799, Type K	–
Polyethylene (PE) Precoated Corrugated Steel Pipe	M 245 and M 246	Minimum thickness 10 mil on each of the surfaces.

- (a) Perforations shall conform to the requirements of F 758.
- (b) Bands with dimples are prohibited.



(c) All Corrugated Steel Pipe shall be aluminum-coated Type 2 conforming to M 274 unless otherwise specified.

905.02 CERTIFIED REINFORCED CONCRETE PIPE PLANTS. Reinforced concrete pipe (RCP) will be accepted on certification based on TC-1.03 and the requirements outlined below. This includes the sampling, testing, documentation, and certification of the product by the manufacturer in combination with an Administration monitoring program.

Annual Inspections. Plants producing material for SHA, or an SHA inspected contract, for the first time or after a break in production longer than one calendar year will be subject to a comprehensive inspection of its production, testing, storage facilities, materials used and applicable documentation prior to production. Each plant will be subject to another comprehensive inspection at the beginning of each calendar year thereafter. The Administration will determine whether plant equipment and personnel conform to all applicable specifications and that suitable testing facilities are available. Submit a Quality Control Plan (QCP) for review and approval prior to inspection. The producer is responsible for ensuring timely delivery of the QCP. The QCP shall include the following:

- (a) The manner in which the materials will be handled including.
 - (1) Locations of stockpiles.
 - (2) Methods of weighing and batching material into mixers.
 - (3) Sources of materials and certifications that those materials meet these Specifications.
 - (4) Methods to be used to heat or cool materials during periods of extreme temperature.
- (b) The following Quality Control (QC) procedures.
 - (1) The names, qualifications, responsibilities and a unique identification number for each of the QC personnel and the designation of a QC manager.
 - (2) Sampling and testing methods and frequencies.
 - (3) Method used for inspecting reinforcement cages prior to and during production.
 - (4) Method of curing.
 - (5) Method of maintaining accurate QC records.
 - (6) Samples of forms approved by the Administration.
 - (7) Patching procedure.



(8) Method of preparation of units for shipping.

(9) Method of identification of each unit as tested and approved.

Certification by a Professional Engineer registered in the State of Maryland attesting the plant's facilities conform to all applicable specifications will be accepted in lieu of Administration inspection. However, final determination of conformance will be as determined.

905.02.01 Responsibilities of the Concrete Pipe Producer. Perform Quality Control operations at the plant to ensure that the material conforms to specifications. The QC process will be subject to unannounced periodic Quality Assurance (QA) verification and the plant's QC personnel shall fully participate in the verification process. Submit any change in personnel, production, testing facility and policy as a supplement to the QCP in writing within 10 days.

905.02.02 Lot Size. A pipe lot is defined as a maximum 14-day production run of concrete pipe of like size, material, strength designation, and manufacturing process. The 14 days need not be consecutive, as long as they occur within a period of 30 consecutive days and the manufacturing process is not altered in any way between production days. Lot size may include up to 1000 pieces for 12 to 36 in. pipe and 18 to 36 in. equivalent elliptical diameter pipe, or 500 pieces for 42 in. and larger pipe and 42 in. and larger equivalent elliptical diameter pipe.

905.02.03 Acceptance Testing. Perform a three-edge bearing test to produce a 0.01 in. crack for each lot in conformance with M 170, section 5.1.1 except as modified for pipe diameter per Table 905. Pipe that have been tested only to the formation of a 0.01 in. crack and that meet the 0.01 in. or lesser load requirement will be considered acceptable for use.

905.02.03 Quality Control Testing. Perform one three-edge bearing test to ultimate load at least once every twelve months in conformance with M 170, Section 5.1.1 for each size and class of pipe shipped to SHA inspected contracts. Also, perform an absorption test on each size and class of pipe manufactured and shipped to Administration projects at least once every twelve months. Specify in the QCP the method selected to test the lots for ultimate load and absorption.

905.02.04 Test Facilities. The producer's facilities, equipment, and quality control personnel shall be capable of conducting the tests specified in T 280 and will be approved as part of the Annual Inspection. Identify all QC personnel in accordance with 905.02 (b) (1) with a unique number used for testing and stamping or stenciling pipe for shipping. Record that number in the QCP and include the individual's printed name and signature. Maintain yearly calibration certificates on all equipment used for testing. The



producer may elect to use the services of an independent commercial testing laboratory as approved in lieu of conducting their own tests.

905.02.05 Shipment. Pipe may be shipped to Administration projects only after the required testing for all pipe in the lot have been completed with acceptable results and all pipe to be shipped is at least the age of the test specimens at testing. Visual inspection of the pipe and the accompanying documentation will be made when pipe is received on the project to verify compliance with certification requirements.

Prior to shipping, mark the following information on the inside of each pipe.

- (a) Plant name.
- (b) Plant location.
- (c) Size of pipe.
- (d) Class of pipe.
- (e) Date of manufacture.
- (f) Quality control stamp.
- (g) Quality control personnel number.

905.02.06 Certification. Manufacturer's certification shall accompany each shipment of pipe. Deliver a copy of the certification to the Engineer, the Administration's laboratory, the Contractor, and maintain a copy at the plant. Certification shall include the following:

- (a) The plant name, address, and location.
- (b) Size and class of the pipe.
- (c) Date of manufacture and shipment.
- (d) Number of pieces.
- (e) Administration Contract number.
- (f) Statement of Specification compliance.
- (g) Signature and number of the quality control personnel that inspected the shipment.



905.02.07 Records. Maintain all testing and inspection documents at the production plant for at least three years from the manufacture date and make available upon request. Collect and maintain conformance certificates and mill test reports for aggregates, cement, fly ash, joint material, reinforcing steel, and other materials intended for use in products used on Administration projects.

905.02.08 Quality Control Forms. Maintain an Administration approved quality control form for all pipe produced for use on Administration projects. Include the following on the forms for each lot:

GENERAL INFORMATION	PIPE DIMENSIONS	REINFORCEMENT	TESTS
Plant Name Lot Identification Production Dates Pipe Class Units Per Lot Technician Signature	Diameter Length Wall Thickness Joint Style	Size Spacing Area: Specification and Test Results Adequacy and Quality of Welds and Splices	Visual Inspection Absorption: Specification and Test Results: Once per year
<u>Material Sources</u> Cement Fine Aggregate Reinforcement			THREE EDGE BEARING
			0.01 in. Crack Strength: Specification and Test Results
			Ultimate Strength: Specification and Test Results: Once per year

905.02.09 Responsibilities of the Administration. The Administration will notify each plant when to present its Quality Control Plan. Thirty days will be provided to make arrangements for delivery after the Administration is notified of the plan's completion. Verification of certification by Quality Assurance Audit will be performed a minimum of once per year, as determined.

The Administration reserves the right to discontinue acceptance of RCP if the verification process indicates that materials, test procedures, or finished pipe do not conform to the specifications, Contract Documents or QCP. Producers will be notified of any type of non-compliance revealed during Quality Assurance Audits and provided with a resolution procedure to resolve any deficiencies.



SPECIAL PROVISIONS INSERT
925 — DETECTABLE WARNING SURFACES

CATEGORY 900
MATERIALS

789 **DELETE:** SECTION 925 — DETECTABLE WARNING SURFACES in its entirety.

INSERT: The following.

SECTION 925 — DETECTABLE WARNING SURFACES

925.01 GENERAL. Detectable warning surfaces shall conform to the current accessibility guidelines of the Americans with Disabilities Act (ADA). The Office of Materials Technology (OMT) maintains a Qualified Products List (QPL). Manufacturers seeking inclusion of their product on the QPL shall submit certified test results showing conformance to the properties in 925.07, as well as installation instructions and the types of adhesives and sealants required.

925.02 COMPOSITION. Warning surfaces shall be either flexible or rigid. If there is a change in the composition of a qualified product, the manufacturer shall notify OMT and submit new test results showing conformance with 925.07.

925.02.01 Pavers. Type III Brick Pavers shall conform to the requirements of C 902, Class SX, Type 1, and Application PX. The pavers shall be 2-1/4 x 4 x 8 in. with square edges and a surface meeting 925.03.

925.03 CONFIGURATION AND DIMENSIONS. The warning surface shall consist of a system of truncated domes having a base diameter of 0.9 in. to 1.4 in., a top diameter 50 to 65 percent of the base diameter, and a height of 0.2 in. The domes shall be arranged in a square grid with center-to-center spacing of 1.66 to 2.35 in.

925.04 COLOR. The color shall be homogeneous across the surface of the material and contrast with adjoining surfaces.

925.05 IDENTIFICATION. The top surface shall have an identifier that uniquely distinguishes the manufacturer. Brick pavers are excluded.

925.06 REQUIREMENTS.

TYPE	DESCRIPTION	PHYSICAL TEST REQUIREMENTS
Type I	Cast in Place	A, B, C, D, E, G
Type IIa	Surface Mount, Rigid	A, B, C, D, E, G
Type IIb	Surface Mount, Flexible	A, B, C, D, F, G
Type III	Brick Pavers	925.02.01
Type IV	Prefilled Pavers	A, B, C, D, G



SPECIAL PROVISIONS INSERT
925 — DETECTABLE WARNING SURFACES

925.07 PHYSICAL PROPERTIES.

	PROPERTY	TEST METHOD	SPECIFICATION LIMIT
A	Slip Resistance Coefficient	C 1028 (dry method)	0.80 minimum
B	Abrasive Wear, index	C 501	150 minimum
C	Fade (UV) Resistance/Color Retention	D 4587	Fade or Change in color after 2000 hours less than $\Delta E = 5^*$
D	Freeze/Thaw Resistance	C 1026	No disintegration
E	Adhesion/Bond Strength, pull off	C 482/C 882(as appropriate)	No adhesion failure
F	Adhesion/Bond Strength, peel	D 903/D 429 (modified as appropriate)	No adhesion failure
G	Contrast	Contrast percentage formula** using E 1349 to determine cap Y brightness/light reflectance values (LRV)	Current ADA requirement***

* Chromaticity coordinates (L*a*b* system) checked in conformance with D 2244, before and after test.

** $\text{Contrast \%} = [(B_1 - B_2)/B_1] \times 100,$

where $B_1 = (\text{LRV})$ of the lighter area, and $B_2 = (\text{LRV})$ of the darker area.

*** For the purpose of determining whether a material meets acceptable contrast criteria, use actual cap Y brightness of detectable warning surface, and assume a value of 15 for the cap Y brightness of cured concrete, or a value of 3 for asphalt wearing surfaces to determine percentage difference. Detectable warning surfaces to be installed on other materials are required to undergo additional testing.



**CATEGORY 900
MATERIALS**

SECTION 950 — TRAFFIC MATERIALS

950.12 LUMINAIRES AND LAMPS

796 **ADD**: The following after the last sentence of the first paragraph.

A Light Emitting Diode (LED) Roadway Luminaire shall be a complete lighting device consisting of a cast aluminum housing, LED arrays, LED drivers, terminal blocks, integral transformer, associated hardware, all necessary wiring, and an optical assembly. Each LED Roadway Luminaire shall have a NEMA 3-prong twist lock photo control receptacle and shall be furnished with a shorting cap.

950.12.01 Luminaire Construction.

797 **ADD**: The following after the last sentence of the last paragraph in (c).

(d) Design LED bracket arm mounted luminaires for an operational life of at least eleven years with 70 percent lumen maintenance value of 50 000 hours (L70) at an average operating time of 12 hours per night. The illuminance shall not decrease by more than 30 percent over the minimum operational life of eleven years. All components of the LED Roadway luminaires must be rated for the full service life without maintenance.

Provide LED Roadway luminaires that use no more than 280 watts and are designed to operate at all voltages from 120 volt to 480 volt. For 480 volt operation, an integral transformer shall be provided to reduce the voltage. The power factor of the LED Roadway luminaire shall be 0.90 or higher. The Correlated Color Temperature (CCT) shall be less than 4500 K and the Color Rendering Index (CRI) shall be greater than 65.

All components of the LED Roadway luminaire shall be UL approved. The LED Roadway luminaire housing and lens/refractor shall be sealed to prevent intrusion of moisture for the full service life and comply with Ingress Protection Rating IP-65 or greater. The lens/refractor shall be constructed of a material that will not show visible yellowing due to UV exposure, or exposure to hydrocarbon emission, for the full service life.

Provide LED Roadway luminaire drivers that are Solid State (electronic) type with an input voltage range from 120-277VAC (± 10 percent), maximum rated output current of 530mA (± 5 percent), input frequency of 60Hz, minimum power factor of 90 percent at full load, Total Harmonic distortion less than 20 percent, case



temperature rated for -40°C to 50°C, and contain 3 kV input high voltage surge protection.

LED Roadway Luminaire on board circuitry shall include a Surge Protection Device (SPD) to withstand high repetition noise transients as a result of utility line switching, nearby lightning strikes, and other interference. The SPD shall protect the luminaires from damage and failure for transient peak voltages up to 10kV and transient peak currents up to 10kA.

Complete all photometric testing of the LED Luminaires as specified in IESNA technical memorandums LM-63, LM-79 and LM-80. Perform all testing and calculations using photopic values. No correction for scotopic values will be permitted.

Design the LED Roadway Luminaire to mount on a standard tenon mount. No field adjustment, except for leveling, shall be required for installation. All hardware shall be stainless steel.

For placement on the Qualified Product's List, the product evaluation application must be submitted on the Administration's Maryland Product Evaluation List (MPEL). After submittal, a minimum of 2 luminaires must be provided for evaluation. The Luminaires will be evaluated for 90 days, and returned to the supplier, if desired. The evaluation will be for general durability and suitability of the luminaires. All shipping costs will be the responsibility of the supplier.

950.12.02

798 **ADD**: The following after the last sentence of the first paragraph.

Refer to section 950.12.01 (d) for required lamp wattages and rated lamp life for LED Roadway Luminaires.

**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
Softening Point, F		215 ± 15
Low Temperature Stress Resistance	T 250	No Cracks

(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

SPECIAL PROVISIONS

951.02 — LEAD FREE THERMOPLASTIC MARKINGS

(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-1.03 and shall include the following:

(a) Manufacturer’s name.

SPECIAL PROVISIONS

951.02 — LEAD FREE THERMOPLASTIC MARKINGS

CONTRACT NO. CO4125125

4 of 4

- (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-1.03. 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.

**CATEGORY 900
MATERIALS****SECTION 951 — PAVEMENT MARKING MATERIALS**

951.07 PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT (PPRP) MARKING MATERIAL. The material shall be capable of adhering to hot mix asphalt and portland cement concrete surfaces, and to any existing pavement markings in accordance with manufacturer's recommendations by a pre-coated pressure sensitive adhesive. A primer shall be used to precondition the surface if recommended by the manufacturer. The markings shall be capable of being inlaid in new hot mix asphalt surfaces during the paving operation.

The material shall be highly durable and retroreflective and shall be fabricated of a polymeric material designed for longitudinal and legend/symbol markings subjected to high traffic volumes and severe wear conditions, such as shear action from crossover or encroachment on typical longitudinal configurations, and where high levels of reflectivity are required to ensure the safety of the motoring public.

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.

The material shall remain in place on the pavement surface without being displaced by traffic, and shall not be affected by weather conditions.

951.07.01 Permanent Preformed Patterned Reflective Pavement Marking Material Components.

Composition. The material shall consist of a mixture of polymeric materials, pigments and reflective spheres distributed throughout the base cross-sectional area and reflective spheres bonded to the topcoat surface to provide immediate and continuing retroreflection.

Restrictions. The combined total of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 ppm. Diarylide based pigments and non-leachable lead pigmentation are not acceptable. The presence of these compounds shall be tested for compliance to the specification by X-ray diffraction, ICP, or another comparable method, capable of this level of detection.

951.07.02 Permanent Preformed Patterned Reflective Pavement Marking Material Physical Requirements.

- (a) **Reflectance.** The manufacturer shall certify that the white and yellow materials shall have the minimum initial retroreflectance values of 350 mcd/L/m² for white and 250 mcd/L/m² for yellow markings in any 528 ft section. Reflectance shall be measured using a reflectometer with CEN 30-meter geometry (88.76 degree entrance angle and 1.05 degree observation angle).

SPECIAL PROVISIONS

CONTRACT NO. CO4125125

951.07 — PREFORMED PATTERNED REFLECTIVE MATERIAL

2 of 2

- (b) **Color.** The color of preformed markings shall essentially match the 37886, 33538 or 37038 color chips for white, yellow or black respectively as shown in Federal Standard 595A.
- (c) **Frictional Resistance.** The surface of the retroreflective pliant polymer shall provide a minimum initial average skid resistance value of 45 BPN when tested according to ASTM E 303.

951.07.03 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.

951.07.04 Prequalification. Samples shall be taken by Administration for testing. The manufacturer shall submit any data from AASHTO NTPEP Northeast Test Deck which support material performance. Materials conforming to this Specification will be placed on the Administration's Prequalified List of Patterned Tapes.

951.07.05 Certification. The Contractor shall furnish notarized certification as specified in TC-1.03. 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.



REPORT OF GEOTECHNICAL EXPLORATION

Crouse Park Redevelopment – Visitor Center

Denton
Caroline County, Maryland

July 31, 2006

Prepared For:

Sustainable Science, LLC
410 South Second Street
Denton, Maryland 21629

Attn: Mr. Albert McCullough, P.E.

Prepared By:

GEO-TECHNOLOGY ASSOCIATES, INC.
Geotechnical and Environmental Consultants
3 Sterling Square, Suite 6
Georgetown, Delaware 19947
(302) 855-9761

GTA Job No: 060826

GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL AND
ENVIRONMENTAL CONSULTANTS

A Practicing ASFE Member Firm

July 31, 2006



Sustainable Science, LLC
410 South Second Street
Denton, Maryland 21629

Attn: Mr. Albert McCullough, P.E.

Re: Report of Geotechnical Exploration
Crouse Park Redevelopment – Visitor Center
Denton
Caroline County, Maryland

Gentlemen:

In accordance with our agreement dated April 5, 2006, Geo-Technology Associates, Incorporated (GTA) has completed a geotechnical exploration for the Crouse Park Redevelopment – Visitor Center project located in Denton, Maryland. The exploration consisted of drilling test borings at seven locations across the proposed development area, visually classifying the soils, and performing limited laboratory testing. Transmitted herein is a report of our findings and conclusions regarding preliminary recommendations for timber pile foundations, site grading, and stormwater management facility and pavement construction.

Unless Sustainable Science, LLC specifies otherwise, the samples collected as a part of the subsurface exploration will be disposed of after a period of 60 days from the date of this report. Thank you for the opportunity to be of assistance. If you have any questions or require additional information, please do not hesitate to contact our office.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.

A handwritten signature in black ink, appearing to read "D. Jason Rudd", is written over the typed name.

D. Jason Rudd
Staff Engineer

A handwritten signature in black ink, appearing to read "Gregory R. Sauter", is written over the typed name.

Gregory R. Sauter, P.E.
Vice President



DJR/GRS/tlc

S:\1 Job File\Crouse Park Visitor Center\Report\Crouse Redevelopment Park Report.doc

060826

3 Sterling Square, Suite 6, Georgetown, Delaware 19947 (302) 855-9761 (302) 855-9762 Fax: (302) 856-3388

✦ Abingdon, MD ✦ Laurel, MD ✦ Frederick, MD ✦ Sterling, VA
✦ New Castle, DE ✦ Georgetown, DE ✦ Somerset, NJ ✦ Lehigh Valley, PA

Visit us on the web at www.mragta.com

TABLE OF CONTENTS

	PAGE
INTRODUCTION	1
SITE CONDITIONS.....	1
PROPOSED CONSTRUCTION	2
SITE GEOLOGY.....	2
SUBSURFACE EXPLORATION.....	3
SUBSURFACE CONDITIONS	4
LABORATORY TESTING	5
CONCLUSIONS AND RECOMMENDATIONS	7
Earthwork	7
SWM Bioretention Facility.....	9
Foundations	9
Pavements.....	11
ADDITIONAL SERVICES.....	13
LIMITATIONS.....	13
ASFE—Important Information About Your Geotechnical Engineering Report	
APPENDICES	
Appendix A – Figures	
Figure No. 1 – Site Location Plan	
Figure No. 2 – Exploration Location Plan	
Figure Nos. 3 through 5, Subsurface Profiles	
Appendix B – Exploration Logs	
Table 1, Exploration Data Summary (1 Sheet)	
Notes For Exploration Logs (1 Sheet)	
Exploration Logs (7 Sheets)	
Appendix C – Laboratory Data (4 Sheets)	

REPORT OF GEOTECHNICAL EXPLORATION

CROUSE CENTER REDEVELOPMENT – VISITOR CENTER DENTON CAROLINE COUNTY, MARYLAND JULY 2006

INTRODUCTION

The Town of Denton is considering the redevelopment of land known as Crouse Park located in Denton, Maryland, for construction of a visitor center. GTA understands that the Town of Denton will construct the development features, including parking lot, utilities, stormwater management facility and visitor center.

Geo-Technology Associates, Inc. (GTA) was retained by Sustainable Science, LLC to perform a geotechnical exploration of the site. The scope of this study included field exploration, review of a site plan and previous boring data, limited laboratory testing, and engineering analysis. The field exploration consisted of seven Standard Penetration Test (SPT) borings located within the area of proposed development. Conclusions and recommendations regarding site development were derived from engineering analyses of field data and a site plan entitled Visitor Center Boring Location Plan, prepared by Sustainable Science, LLC and dated April 1, 2006 and site plans and boring logs entitled State of Maryland Department of Transportation State Highway Administration, prepared by the State of Maryland and revised dated February 13, 1986.

SITE CONDITIONS

Referring to the Site Location Plan and the Exploration Location Plan included as Figures 1 and 2, respectively in Appendix A, the project site is located along the north side of Gay Street and the northeast side of Franklin Street in Denton, Maryland. The project site is comprised of an irregularly shaped parcel consisting of the existing Crouse Park including a basketball court, pavilion and restrooms. Partially paved parking lot areas bound the property along the south and west sides of the site with the Choptank River along the north side of the property. Topographically, the ground surface generally ranges between Elevation 3 and 4 Mean Sea Level (MSL). GTA understands from Sustainable Science, LLC that the site has been periodically filled since approximately 1800.

PROPOSED CONSTRUCTION

Based upon review of the referenced plans, the site development will consist of a two-story wood-framed structure supported on piles with first floor approximately eight feet above existing ground surface. The proposed building footprint measures approximately 89 feet by 28 feet in plan. In the proposed building area, timber pile layout is approximately 8 feet on center east and west and approximately 12 to 13.8 feet on center north and south. The maximum individual pile loads will be 25,000 pounds. The visitor center will be supported on piles at a height of 8 feet above grade. While proposed grades are anticipated to closely match the existing grades, GTA understands that due to floodplain constraints, the grade may be raised by as much as 2 feet in some areas to achieve ground surface Elevation 5 MSL. The site will also include a Stormwater Management (SWM) bioretention facility and an approximately 12,000 square foot parking lot, both of which, are anticipated to closely match existing grades.

SITE GEOLOGY

According to the Geologic Map of Caroline County (1998), published by the Maryland Geologic Survey, the site is within the Coastal Plain Physiographic Province. Coastal Plain sediments were deposited in a marine environment during times of high water. More specifically, the site lies within the soils mapped as part of the Kent Island formation of Quaternary geologic age and the underlying Chesapeake Group sediments of Tertiary geologic age. The Pleistocene deposits of the Kent Island Formation are characterized by "...interbedded silt, sand and clay; (and) in places, the fine sediment contains abundant organic matter." The older sediments underlying the Pleistocene deposits are of the Chesapeake Group. These Miocene deposits are characterized by "... interbedded gray to dark gray, massive to finely laminated silt and clayey silt, and yellow to white, fine-grained massive, loose, micaceous, slightly feldspathic quartz sand." Please review the referenced publication and map for further details regarding this geologic unit. It is pointed out that man-made fills also occur on the site.

SUBSURFACE EXPLORATION

The field exploration consisted of drilling Standard Penetration Test (SPT) borings at seven locations, designated as B-1 and B-2 in the proposed visitor center, B-3 through B-5 in proposed parking lot, and SWM-1 and SWM-2 in the proposed bioretention pond, in the areas of the proposed development. The test borings were drilled on July 11 and 12, 2006 to depths of 5 to 40 feet below the existing ground surface using an ATV-mounted CME 55 drill rig. The borings were drilled at the approximate locations shown on the Exploration Location Plan, presented as Figure 2 in Appendix A. GTA located the borings by tape measuring from the existing site features. The exploration locations indicated on the plan should be considered approximate. The ground surface elevations at the explorations were estimated from plan topography. Actual ground surface elevations were not determined.

Standard Penetration Testing was performed in the boreholes, with soil samples obtained at approximately 2 ½-foot intervals in the upper 10 feet and then at 5-foot intervals thereafter. Standard Penetration Testing involves driving a 2-inch O.D., 1 ⅜ -inch I.D. split-spoon sampler with a 140-pound hammer free-falling 30 inches. The SPT N-value, given as blows per foot (bpf), is defined as the total number of blows required to drive the sampler from the 6 to 18 inches below the sampling depth.

Samples obtained from the borings were returned to GTA's office for visual classification by GTA personnel. Selected samples recovered from the field exploration were submitted for limited laboratory analysis. The soil layers were classified in accordance with the Unified Soil Classification System (USCS) and the American Association of State Highway and Transportation Officials (AASHTO) classification system, with the SWM soil layers also classified in accordance with the United States Department of Agriculture (USDA). Classifications provided on the logs are visual descriptions, supplemented by available laboratory data. The exploration logs are presented in Appendix B. It is pointed out that the logs represent our interpretation of the field data based on observation and selected soil classification tests. The interfaces indicated on the logs may be gradual.

SUBSURFACE CONDITIONS

The explorations generally confirm the description of subsurface conditions provided in the *SITE GEOLOGY* section of this report. Beneath a 4- to 12-inch thick layer of topsoil, the explorations encountered a fill/peat mixture extending to depths of 2.5 to at least 5 feet below the ground surface. Boring B-4 was terminated at 5 feet in the fill. The fill/peat mixture was visually classified as consisting of a mixture of PEAT and silty SANDs (USCS classification SM; AASHTO classification A-2-4/A-8) and well graded SANDs with silt (SW-SM, A-2-4/A-8). The relative density of the fill was very loose to medium dense based on SPT N-values of 4 to 33 blows per foot (bpf).

Below the fill at SPT borings B-1, B-2, B-3 and B-5 and extending to a depth of 5.5 to 8 feet at B-1 and B-2 and to the boring termination depth of 5 feet at B-3 and B-5, the native soils were comprised of well graded to silty SANDs (SW-SM; A-2-4). The relative density of the SANDs was medium dense to dense based upon N-values of 12 to 41 bpf.

Underlying the fill at SWM-1 and SWM-2 and the SANDs at B-1 and B-2, the explorations encountered soils visually classified as PEAT (USDA SILT; Pt; A-8) extending to a depth of 25 feet at B-1 and 27 feet at B-2 and to the boring termination depth of 10 feet at SWM-1 and SWM-2. The peat and silt mixture generally exhibited soft to stiff consistency based on N-values of 2 to 10 bpf. The majority of the PEAT was soft.

At B-1 and B-2, the native soils below the PEAT consisted of silty SANDs (SM, A-2-4) and fat CLAYs (CH, A-7-6). The relative consistency of the fine-grained soils was very stiff to hard based on an SPT N-values of 16 to 32 bpf. The relative density of the granular soils from 37 to 40 feet was dense based on a SPT N-value 31 bpf.

Water levels encountered during the exploration program were at depths of 2 to 6.9 feet below the ground surface at the SPT borings. Longer-term readings (one day after completion) indicated water at depths of 0.5 to 1.9 feet below the ground surface and corresponding to Elevation 1.1 to 2.5 MSL. The groundwater levels can be expected to fluctuate with seasonal changes, precipitation, and other factors such as development activity. Additionally, perched water conditions develop in granular soils overlying fine-grained soils during the “wet season” as well as during heavy periods of precipitation. Please refer to the exploration logs and Table 1, Exploration Data Summary provided in Appendix B for further information. Idealized subsurface profiles are shown on Figure Nos. 3 through 5, Section A-A, B-B and C-C in Appendix A.

LABORATORY TESTING

Selected samples obtained from the borings were tested for grain-size analysis, Atterberg Limits, moisture-density relationships, California Bearing Ratio (CBR), natural moisture contents and organic content. The grain-size analysis and Atterberg Limits testing were performed to determine the Unified Soil Classification System (USCS) and the American Association of State Highway and Transportation Officials (AASHTO) and/or the United States Department of Agriculture (USDA) designations for the soil. USCS and AASHTO classifications provide information regarding soil behavior beneath pavement and foundation systems. The results of testing are as follows:

TABLE I
SUMMARY OF LABORATORY TESTING

BORING NO.	DEPTH (ft)	USCS CLASSIFICATION	AASHTO CLASSIFICATION	USDA	LL %	PI %
B-1	28.5 – 30	Fat CLAY with SAND (CH)	A-7-6	NT	54	33
SWM-1	1.0 – 4.5	Well-graded SAND with Silt/ PEAT (SW-SM/Pt)	A-2-4/A-8	SAND	NP	NP

Note: LL=Liquid Limit PI=Plastic Index NP=Non-plastic; NT=Not Tested

**TABLE II
 NATURAL MOISTURE CONTENT SUMMARY**

Exploration No.	Depth (ft.)	Natural Moisture (%)
B-1	8.5 – 10	107
B-1	28.5 – 30	40
B-1	33.5 – 35	57
B-2	18.5 – 20	58
B-2	28.5 – 30	41
B-2	33.5 – 35	51
B-4	2 – 2.5	163
SWM-1	1 – 3	16
SWM-1	6 – 7.5	220
SWM-2	8.5 – 10	354

**TABLE III
 SUMMARY OF SUPPLEMENTAL TEST DATA**

Exploration No.	Depth (ft)	Natural Moisture (%)	Organic Content (%)
B-4	2 – 2.5	163	59.4

One bulk, near-surface sample, obtained from boring SWM-1 was tested for moisture-density relationships in accordance with the Modified Proctor (ASTM D-1557, AASHTO T-180) and CBR (ASTM D-1883) testing for use in evaluating the suitability of these soils for reuse as fill and pavement subgrade supporting quality. Results of these tests are summarized in the following table.

**TABLE IV
 SUMMARY OF COMPACTION
 (ASTM D-1557/AASHTO T-180, the Modified Proctor and ASTM D1883, California Bearing Ratio)**

EXPLORATION NO.	DEPTH (FT)	MAXIMUM DRY DENSITY (PCF)	OPTIMUM MOISTURE (%)	NATURAL MOISTURE (%)	CBR AT 97% COMPACTION (%)
SWM-1	1.0 – 4.5	122.9	10.0	16.0	16

The results of these tests are included within Appendix C. Please refer to the laboratory test results included within Appendix C for additional information.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of this study, it is our opinion that construction of the proposed improvements are feasible, given that the geotechnical recommendations are followed, and that the standard level of care is maintained during construction.

GTA cautions that this exploration was performed as a general screening of site subsurface conditions. Field engineering during construction should be provided to fully evaluate specific construction and development improvements. GTA's preliminary recommendations are provided in the following paragraphs.

Earthwork

Minimal cuts and fills on the order of one foot or less are anticipated areas to achieve grades, unless grades need to be raised to Elevation 5 MSL, in which case, 1 to 2 feet of fill will be needed. If grades are raised more than a foot significant post construction ground settlement may occur from the consolidation of the underlying PEAT. Prior to the placement of compacted fill, areas below proposed structures including the parking lot, should be stripped and grubbed to remove surface topsoil, concentrated organic matter, and existing pavements. GTA recommends that for earthwork estimates, a stripping thickness of 12 inches be utilized. The actual stripping thickness will be dependant on localized topsoil development, precipitation, soil moisture, construction traffic disturbance, and contractor care.

After stripping, subgrade areas should be observed by GTA. A loaded tandem-axle dump truck or other construction equipment should not be used due to very shallow ground water. No fill should be placed until GTA approves the subgrade. Wet soils near surface grade will result in poor trafficability. Positive drainage should be maintained during construction.

Due to the presence of a mixture of fill and peat, excavated materials with concentrated organic materials, such as PEAT, will not be suitable for reuse as structural fill and should be disposed of properly offsite. The extent of re-usable excavated existing fill can best be determined by GTA in the field at the time of excavation and will be dependant, in part, upon the degree of segregation techniques used by the contractor during excavation. With proper segregation, most near surface granular on-site soils beneath the topsoil are considered suitable for reuse as structural fill material.

For utility and site earthwork construction, the success of these operations will be largely dependent upon the weather conditions at the time of the earthwork construction. Summer construction season is recommended to reduce the premium cost for drying. A contingency should be established for moisture adjustments and importing suitable materials. If the work is performed during wet weather, offsite borrow may be required to complete the earthwork construction. Off-site borrow should meet Unified Soil Classification System (USCS) designation SM, SP, SW, GP, GM, or GW and be approved by the Geotechnical Engineer.

All fills should be constructed in maximum 8-inch thick loose lifts and be compacted to the following specifications:

COMPACTION SPECIFICATIONS

Structure / Fill Location	Compaction / Moisture Specification
Top 1 foot of pavement subgrade	97% of ASTM D-1557 Moisture: \pm 3% of optimum
Fills below 1 foot of pavement subgrade	92% of ASTM D-1557 Moisture: \pm 3% of optimum

A full time GTA soils-technician should monitor fill construction. Compactive effort should be verified by in-place density testing.

SWM Bioretention Facility

Within the proposed Stormwater Management (SWM) facility area, the borings encountered fill extending to depths of 2.5 to 4.5 feet below the existing ground surface. Below the fill, PEAT extended to at least the boring termination depth of 10 feet at borings SWM- 1 and SWM-2. Groundwater was at a depth of 0.5 to 1.4 feet below the ground surface. If possible, the pond or bio-retention facility bottom should be designed above the PEAT material. Due to the presence of fill, peat and shallow groundwater, stormwater disposal by infiltration practice is not recommended at this project. The proposed grade within the SWM facility area should be lower or closely match existing grade raising grades in the SWM facility area may result in significant settlement and subsequent maintenance problems.

Foundations

GTA understands that the visitor center first floor will be supported on timber piles at a height of approximately eight feet above existing ground surface. The proposed building footprint measures approximately 89 feet by 28 feet in plan. In the proposed building area, the timber pile layout is approximately 8 feet on center east and west and approximately 12 to 13.8 feet on center north and south. An additional ten feet will be added to driven pile lengths for the timber pile "stick-up" from ground surface.

At B-1 and B-2, the SPT borings within the area of the visitor center area encountered fill materials and native SANDs extending to depths of 5.5 to 8 feet below ground surface. Also, a 19- to 24.5-foot thick PEAT layer was encountered extending to depths of 25 to 27 feet below the ground surface. The native fine-grained soils extending from 25 to 37 feet below ground surface at B-1 and to the boring termination depth of 35 feet at B-2 were very stiff to hard. The underlying sands extending from 37 feet to the boring termination of 40 feet below the ground surface at B-1, consisted of dense silty SANDs. The longer term groundwater level at the time of exploration was at a depth of 1.5 to 1.9 feet below the ground surface and corresponded to Elevation 2.1 to 2.5 MSL.

Driven displacement piles such as Class B timber piles may be designed for an allowable axial load of 15 tons for Class B timber piles. Timber piles should conform to the requirements of ASTM D-25 for round foundation timber piles and should be treated in accordance with AWWA Standard C3. Splicing of timber piles is not recommended on this project. Timber pile butts should generally be driven to a minimum of one foot above cutoff so that the broomed portion can be cut off.

Provided that the site grades are not raised more than a foot above existing grade, driven pile lengths below the ground surface are estimated to be on the order of 30 feet. Based on preliminary analysis, timber pile lengths should be 40 feet with a stick-up of ten feet above the ground surface.

In consideration of potential negative skin friction development from the weight of the new fill if grades are raised more than a foot but no more than 2 feet, each pile location should be pre-augered using a 10-inch diameter auger to a depth of 7 feet below the ground surface. Also, the piles should be driven to an allowable 23 ton capacity with the pile allowable building load portion limited to 15 tons per pile. All piles should be driven to a minimum tip of Elevation -25 MSL and deeper as required to achieve the driving resistance of 23 tons per pile. Based on preliminary analysis and considering a new ground surface grade at Elevation 5 MSL, driven pile lengths below the ground surface are estimated to range from about 30 to 35 feet below the new ground surface. Total pile lengths with a 10-foot stick-up, correspond to lengths of 40 to 45 feet. GTA should be consulted for additional recommendations before driving production piles deeper than 40 feet below the ground surface.

A minimum of two control (i.e., test probe) piles should be driven at production pile locations near GTA's explorations to better estimate production pile lengths and any additional driving criteria. Where practical, control piles should be at least five feet longer than the estimated production pile lengths so that adjustments can be made in the field based on driving results. The same hammer used to drive control piles should be used for driving production piles. Driving

criteria should be established by means of the Modified Engineering News Formula or the Gates Equation based on the type of hammer used.

Field observation by GTA should be provided during installation of the test probe and production piles. These observations will be important for making adjustments to the pile tip elevations or other recommendations, especially during test probe pile installation. Where practical, production piles should not be ordered until the test probe pile program is complete.

Pavements

Final pavement grades were not available at the date of this report. Cut and fill of one foot or less is anticipated to bring the parking lot to proposed grade. The pavement section should be designed based on anticipated subgrade conditions and traffic intensity. Laboratory testing of selected site soils indicated a CBR value of 16 for the well-graded SAND with silt/PEAT (A-2-4/A-8) sample tested. The CBR value is based upon a relative compaction of 97 percent of maximum dry density (Modified Proctor, ASTM D 1557, AASHTO T-180). Based upon the CBR value, the site soils tested are considered good for supporting standard pavement sections. However, the presence of PEAT may result in irregular pavement supporting conditions.

Based on GTA's experience with similar projects, GTA recommends consideration of a pavement material consisting of stone, shell or pavers for use in parking lot area. Considering the presence of PEAT and shallow ground water, the use of these non-binding paving materials will help to increase the efficiency of parking lot repair/maintenance if local areas experience irregular settlement over time.

If a bituminous concrete pavement is preferred and based on GTA's experience with similar developments, construction traffic is likely to be more significant for the design of the pavement. However, over the pavement life, above normal maintenance may be needed to repair localized distressed areas. The pavement section thickness should be designed to reflect construction traffic and the subgrade supporting quality of the site soils. It is likely the majority of the near surface on-

site soils will generally be suitable for the support of the pavement thickness section indicated in the following paragraphs. However, subgrade materials should be carefully evaluated prior to graded aggregate base placement and paving. Therefore, GTA recommends that the upper 12 inches of roadway subgrade be constructed of fill with the following characteristics:

PAVEMENT SUBGRADE SPECIFICATIONS

Liquid Limit	40 or less
Plasticity Index	15 or less
Maximum Dry Density	105 pcf or greater
California Bearing Ratio	5 or greater

Prior to construction of the pavement section, the pavement subgrade should be observed under the observation of GTA to verify stability. A loaded tandem-axle dump truck or other construction equipment should not be used due to shallow ground water. Unstable or unsuitable soils should be over-excavated to a stable bearing layer. Referring to SPT boring logs B-3, B-4 and B-5, subgrade areas consisting of concentrated PEAT will need to be overexcavated. The subgrade may be re-established with compacted crushed stone (Maryland CR-6). A contingency for undercutting and replacement of unsuitable materials should be provided. The recommended parking lot pavement section is as follows:

Parking Lot Pavement Section

<u>Layer</u>	<u>Standard Duty</u>
Hot Mix Asphalt Surface Course (9.5 mm)	1 ½ inches
Hot Mix Asphalt Base Course (12.5 mm or 19 mm)	3 inches
Aggregate Subbase (Maryland CR-6)	6 inches
Approved Subgrade	

All pavement materials and construction should conform to Maryland State Highway Administration (MSHA) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, latest edition.

ADDITIONAL SERVICES

We recommended that during construction of the subject project, GTA be retained to provide observation and testing services for the following items.

- Review final structural plans to evaluate if the plans conform to the intent of this report.
- Field observation by GTA should be provided during pile installation of the test probe and production piles to verify the pile dimensions and installation depth, and to confirm that the allowable pile capacity was achieved. These observations will be important for making adjustments to the pile tip elevations or other recommendations given herein, especially during test probe pile installation.
- Provide testing observation and services during fill placement to evaluate if the work is being performed in accordance with the project specifications and intent of this report.
- Observe the proof-rolling of fill and pavement subgrades prior to placing fill or base course to evaluate stability.

LIMITATIONS

This report, including all supporting boring logs, field data, field notes, laboratory test data, calculations, estimates and other documents prepared by GTA in connection with this project have been prepared for the exclusive use of Sustainable Science, LLC pursuant to agreements between GTA and Sustainable Science, LLC in accordance with generally accepted engineering practice. All terms and conditions set forth in the Agreement and the General Provisions attached thereto are incorporated herein by reference. No warranty, express or implied, is made herein. Use and reproduction of this report by any other person without the expressed written permission of GTA and Sustainable Science, LLC is unauthorized and such use is at the sole risk of the user.

The analysis and preliminary recommendations contained in this report are based on the data obtained from limited observation and testing of the encountered materials. Test borings indicate soil conditions only at specific locations and times, and only at the depths penetrated. They do not necessarily reflect strata or variations that may exist between test boring locations. Consequently, the analysis and recommendations must be considered preliminary until the subsurface conditions can be verified by direct observation at the time of construction. If variations of subsurface conditions from those described in this report are noted during construction, recommendations in this report may need to be re-evaluated.

In the event that any changes in the nature, design, or location of the facilities are planned, the conclusions and recommendations contained in this report should not be considered valid unless the changes are reviewed and conclusions of this report are verified in writing. Geo-Technology Associates, Inc. is not responsible for any claims, damages, or liability associated with interpretation of subsurface data or reuse of the subsurface data or engineering analysis without the expressed written authorization of Geo-Technology Associates, Inc.

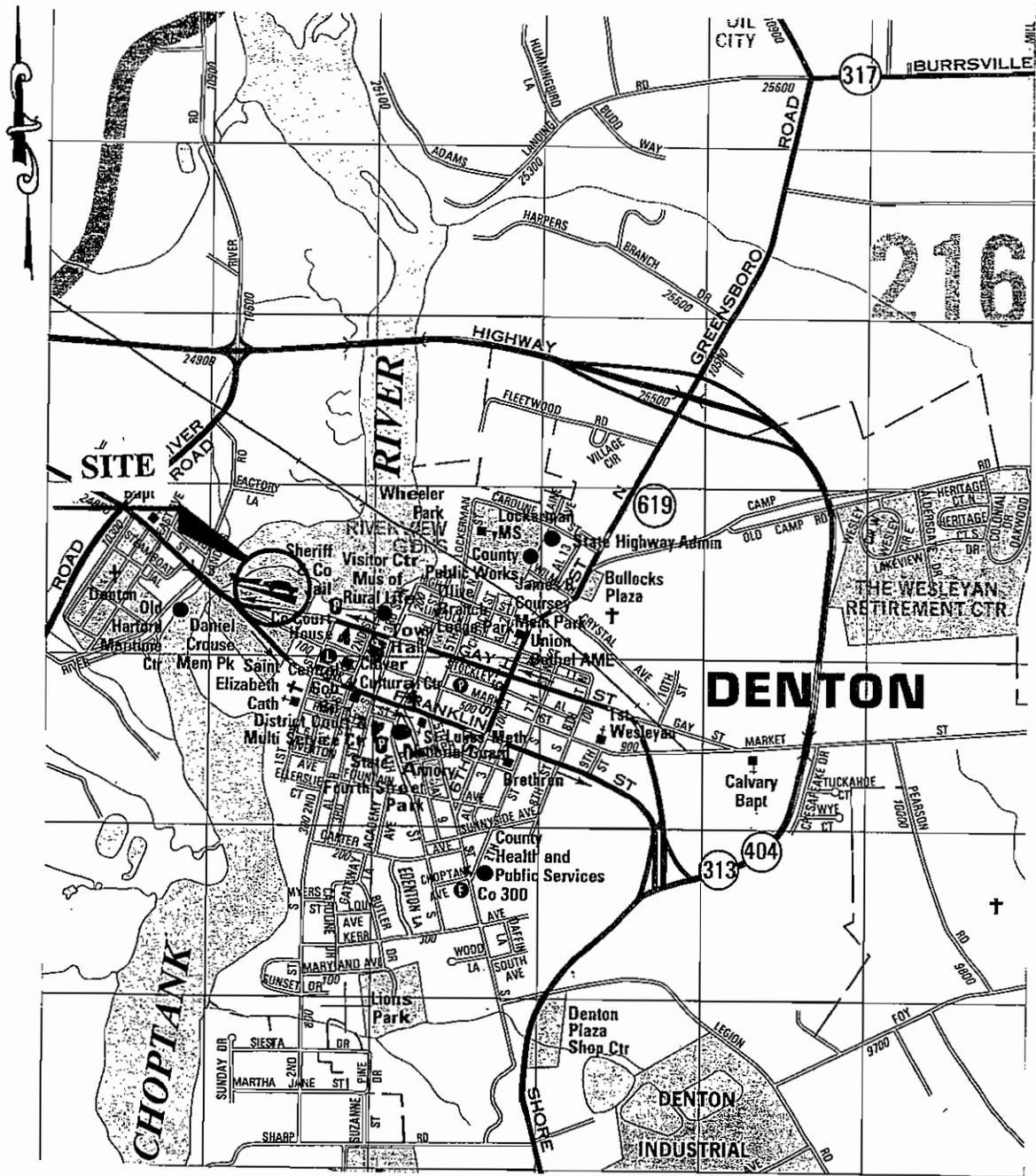
The scope of our services for this geotechnical exploration did not include any environmental assessment or investigation for the presence or absence of wetlands, or hazardous or toxic materials in the soil, surface water, groundwater or air, on or below or around this site. Any statements in this report or on the logs regarding odors or unusual or suspicious items or conditions observed are strictly for the information of our Client.

This report and the attached logs are instruments of service. The subject matter of this report is limited to the facts and matters stated herein. Absence of a reference to any other conditions or subject matter shall not be construed by the reader to imply approval by the writer.

060826

GEO-TECHNOLOGY ASSOCIATES, INC.

APPENDIX A
FIGURES



Copyright ADC The Map People
 Permitted Use Number 20606150

Figure 1



GEO-TECHNOLOGY ASSOCIATES, INC.
 GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947
 (302) 855-9761 Fax (302) 856-3388

Site Location Plan
Crouse Park Redevelopment
Visitor Center
Caroline County, Maryland

SCALE	DATE	DRAWN BY	DESIGN BY	REVIEW BY	JOB NO.
NTS	July 2006	ADC		GRS	060826

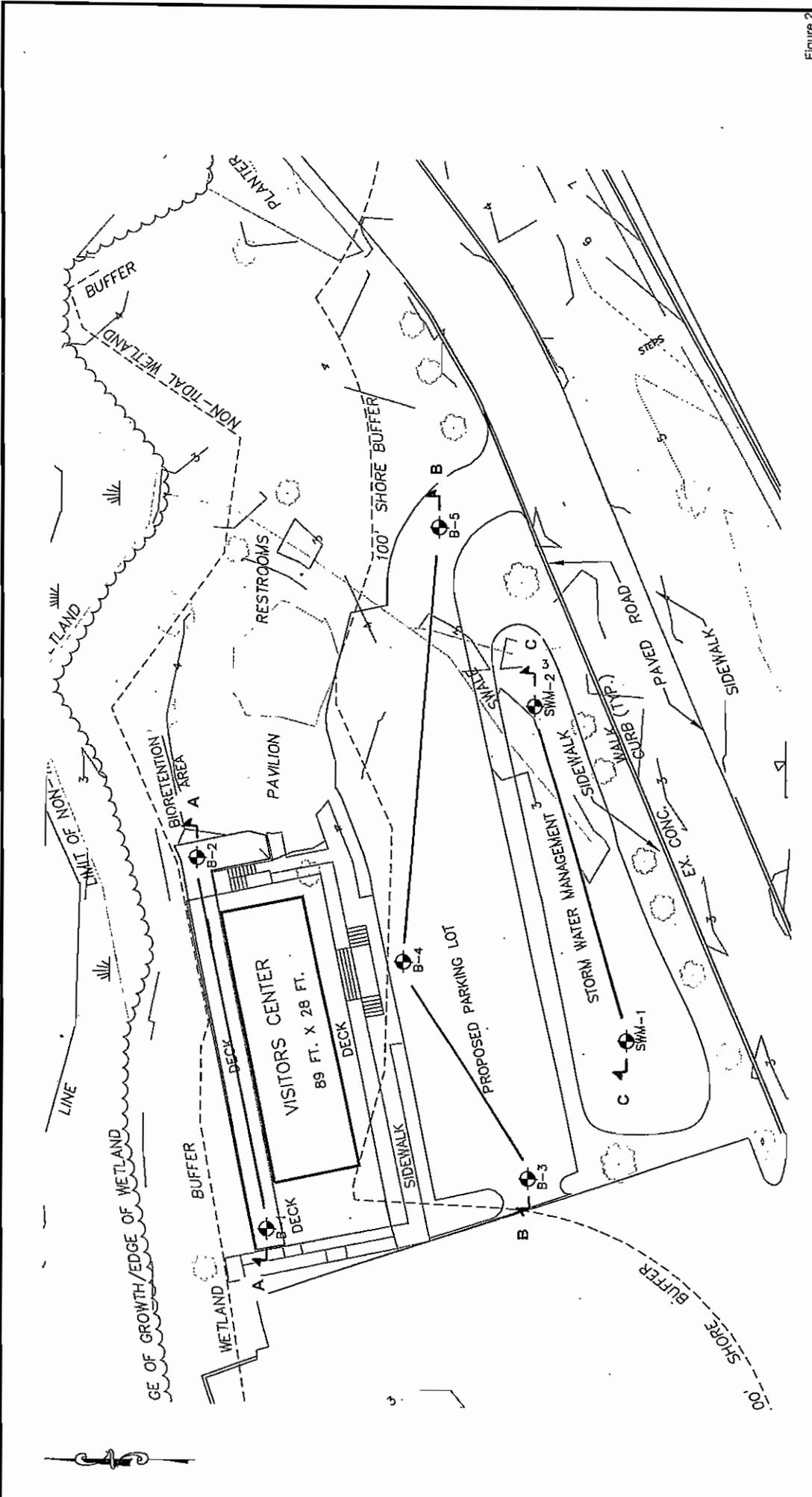
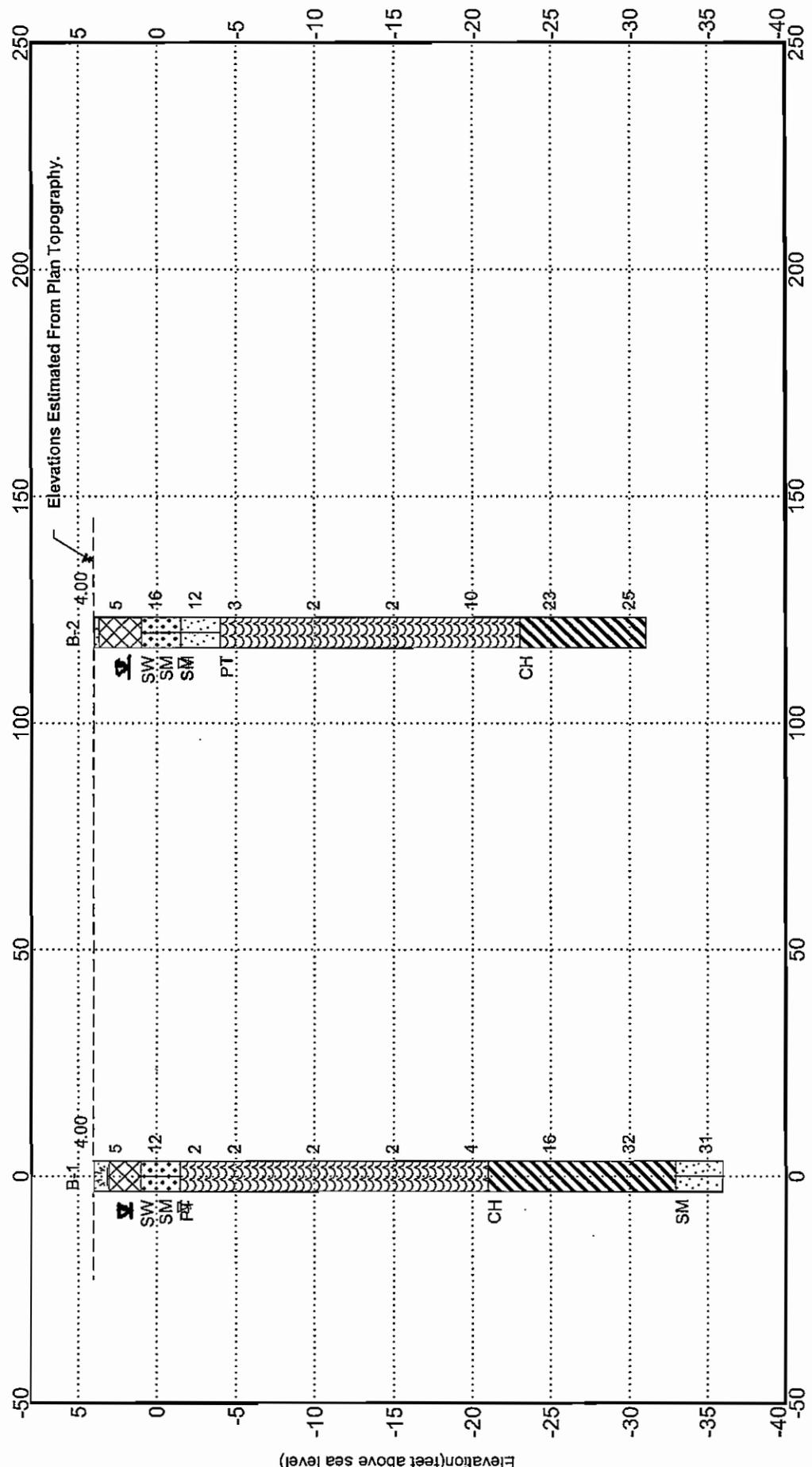


Figure 2

	<p>Exploration Location Plan Crouse Park Redevelopment - Visitor Park Caroline County, Maryland</p>	<p>GEO-TECHNOLOGY ASSOCIATES, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS 3 Sterling Square, Suite 6 Georgetown, Delaware 19947 (302) 855-9761 Fax (302) 856-3388</p>	<p>DESIGN BY Sustainable Science, LLC</p>	<p>DATE July 2006</p>	<p>SCALE 1" = 30' +/-</p>	<p>REVIEW BY GRS</p>	<p>JOB NO. 060826</p>
<p>Exploration Location Plan taken from a plan entitled Visitor Center Boring Location Plan, prepared by Sustainable Science, LLC and dated April 1, 2006. Exploration locations selected by Sustainable Science. GTA located the exploration locations by tape measuring from the existing site features. Exploration locations indicated on the plan should be considered very approximate.</p>							



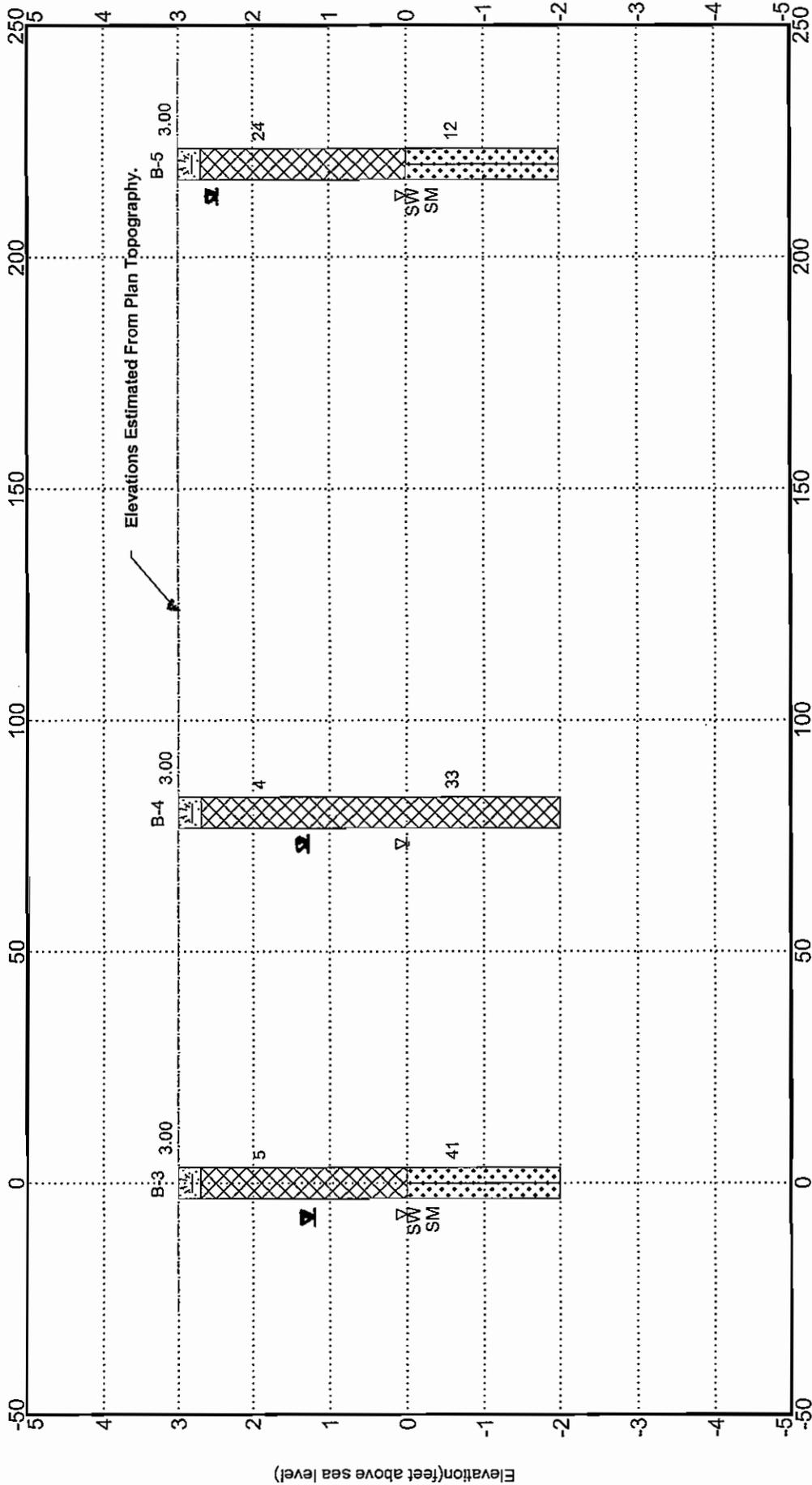
Boring	North	East	Elev.	Depth
B-1	0	0	4.0	35.0
B-2	0	120	4.0	35.0

DISTANCES:
 Beginning -50
 Ending 250
 VIEWING ANGLES (degrees):
 Horizontal 0.0
 Vertical 0.0



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

Section A-A		
PROJECT #	DATE	FIGURE
060826	Jul 20, 06	3
Crouse Park Redevelopment - Visitor Center Caroline County, Maryland		



Boring	North	East	Elev.	Depth
B-3	0	0	3.0	5.0
B-4	0	80	3.0	5.0
B-5	0	220	3.0	5.0

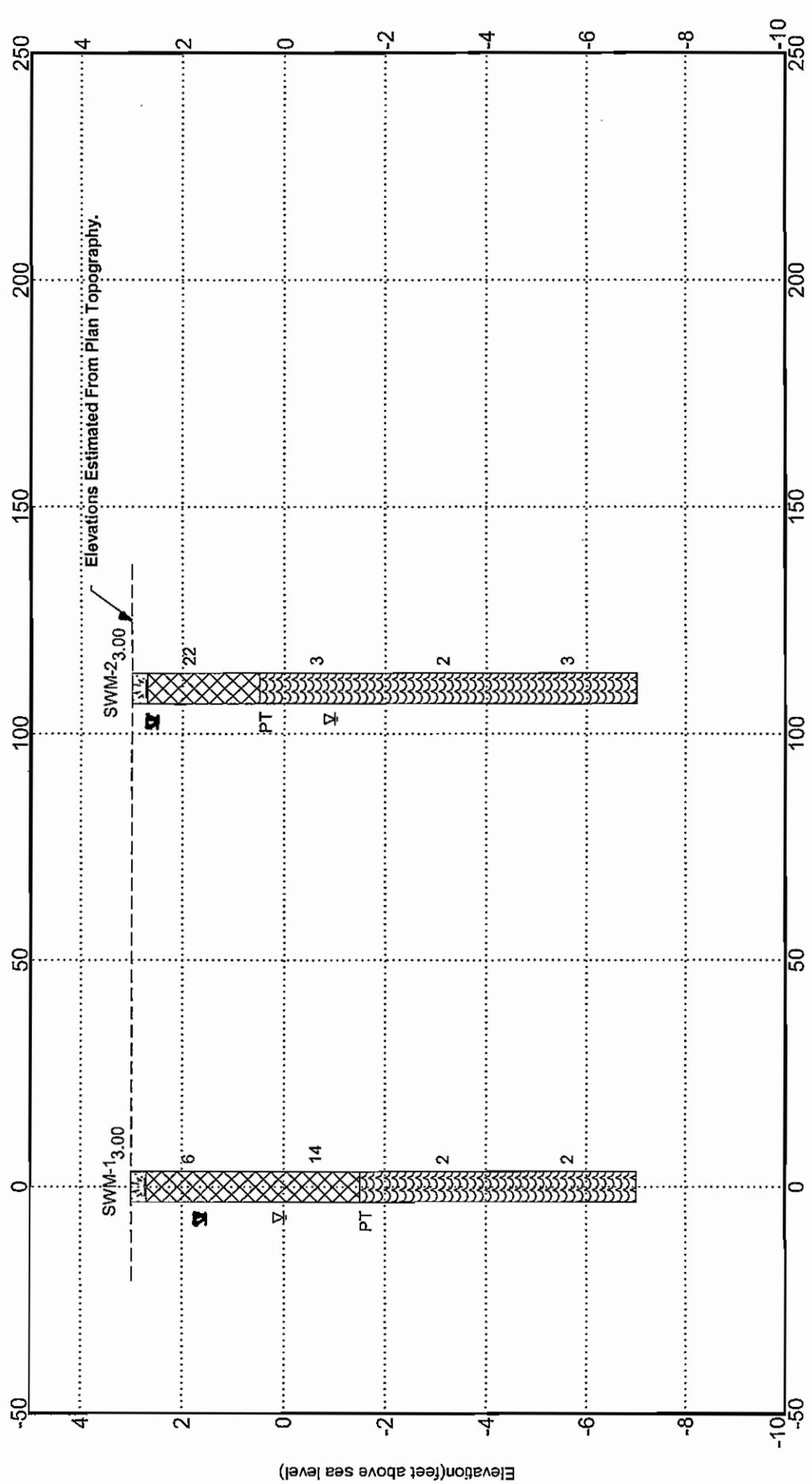
DISTANCES:
 Beginning -50
 Ending 250
 VIEWING ANGLES (degrees):
 Horizontal 0.0
 Vertical 0.0



GEO-TECHNOLOGY
 ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

Section B-B	
PROJECT #	DATE
060826	Jul 20, 06
FIGURE	
4	

Crouse Park Redevelopment - Visitor Center
 Caroline County, Maryland



Boring	North	East	Elev.	Depth
SWM-1	0	0	3.0	10.0
SWM-2	0	110	3.0	10.0

DISTANCES:
 Beginning -50
 Ending 250
 VIEWING ANGLES (degrees):
 Horizontal 0.0
 Vertical 0.0



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

Section C-C		
PROJECT #	DATE	FIGURE
060826	Jul 20, 06	5
Crouse Park Redevelopment - Visitor Center Caroline County, Maryland		

Elevation(feet above sea level)

APPENDIX B
EXPLORATION LOGS

NOTES FOR EXPLORATION LOGS

KEY TO USCS TERMINOLOGY AND GRAPHIC SYMBOLS

MAJOR DIVISIONS (BASED UPON ASTM D2487-00)			SYMBOLS		
			GRAPHIC	LETTER	
COARSE GRAINED SOILS	GRAVEL AND GRAVELY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS <small>(LESS THAN 15% PASSING THE NO. 200 SIEVE)</small>		GW	
		GRAVELS WITH FINES <small>(MORE THAN 15% PASSING THE NO. 200 SIEVE)</small>		GP	
	SAND AND SANDY SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	CLEAN SANDS <small>(LESS THAN 15% PASSING THE NO. 200 SIEVE)</small>	SANDS WITH FINES <small>(MORE THAN 15% PASSING THE NO. 200 SIEVE)</small>		GM
			CLEAN SANDS		SW
		SANDS WITH FINES <small>(MORE THAN 15% PASSING THE NO. 200 SIEVE)</small>	SANDS WITH FINES		SM
			SANDS WITH FINES		SC
FINE GRAINED SOILS	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50	SILT OR CLAY <small>(<15% RETAINED THE NO. 200 SIEVE)</small>		ML	
		SILT OR CLAY WITH SAND OR GRAVEL <small>(15% TO 30% RETAINED THE NO. 200 SIEVE)</small>		CL	
		SANDY OR GRAVELY SILT OR CLAY <small>(>30% RETAINED THE NO. 200 SIEVE)</small>		OL	
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50	SILT OR CLAY <small>(<15% RETAINED THE NO. 200 SIEVE)</small>		MH	
		SILT OR CLAY WITH SAND OR GRAVEL <small>(15% TO 30% RETAINED THE NO. 200 SIEVE)</small>		CH	
		SANDY OR GRAVELY SILT OR CLAY <small>(>30% RETAINED THE NO. 200 SIEVE)</small>		OH	
HIGHLY ORGANIC SOILS				PT	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

ADDITIONAL TERMINOLOGY AND GRAPHIC SYMBOLS

ADDITIONAL DESIGNATION	DESCRIPTION		GRAPHIC SYMBOLS
	DESCRIPTION	"N" VALUE	
	TOPSOIL		
	MAN MADE FILL		
	GLACIAL TILL		
	COBBLES AND BOULDERS		
RESIDUAL SOIL DESIGNATION	HIGHLY WEATHERED ROCK	50 TO 50/1"	
	PARTIALLY WEATHERED ROCK	LESS THAN 50/1" AUGER PENETRABLE	

COARSE GRAINED SOILS (GRAVEL AND SAND)

DESIGNATION	BLOWS PER FOOT (BPF) "N"
VERY LOOSE	0 - 4
LOOSE	5 - 10
MEDIUM DENSE	11 - 30
DENSE	31 - 50
VERY DENSE	>50

NOTE: "N" VALUE DETERMINED AS PER ASTM D1586

FINE GRAINED SOILS (SILT AND CLAY)

CONSISTENCY	BPF
VERY SOFT	<2
SOFT	2 - 4
MEDIUM STIFF	5 - 8
STIFF	9 - 15
VERY STIFF	16 - 30
HARD	>30

NOTE: ADDITIONAL DESIGNATIONS TO ADVANCE SAMPLER INDICATED IN BLOW COUNT COLUMN:
WOH = WEIGHT OF HAMMER
WOR = WEIGHT OR ROD(S)

SAMPLE TYPE

DESIGNATION	SYMBOL
SPLIT-SPOON	S-
SHELBY TUBE	U-
ROCK CORE	R-

WATER DESIGNATION

DESCRIPTION	SYMBOL
ENCOUNTERED DURING DRILLING	
UPON COMPLETION OF DRILLING	
24 HOURS AFTER COMPLETION	

NOTE: WATER OBSERVATIONS WERE MADE AT THE TIME INDICATED. POROSITY OF SOIL STRATA, WEATHER CONDITIONS, SITE TOPOGRAPHY, ETC. MAY CAUSE WATER LEVEL CHANGES.

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

3 Sterling Square, Suite 6 Georgetown, Delaware 19947
 302-855-9761 302-856-3388 FAX



Re: *Crouse Park Redevelopment – Visitor Center*
 Caroline County, Maryland
 GTA Project No.: 060826

TABLE 1
Exploration Data Summary

Exploration No.	*Existing Ground Surface EL. (MSL)	Total Depth of Exploration (ft.)	Topsoil Thickness (In.)	Extent of Fill Peat Mixture From - To (ft.)	Extent of Peat From - To (ft.)	Extent of USCS CH Soils From - To (ft.)	Extent of USCS SW-SM or SM Soils From - To (ft.)	Depth to Groundwater/ El. at Completion (ft./MSL)	Depth to Groundwater/ El. at One Day After Completion of Exploration (ft./MSL)
B-1	4	40	12	1 - 3	5.5 - 25	25 - 37	3 - 5.5 37 - 40	6.9/-2.9	1.9/2.1
B-2	4	35	4	0.3 - 3	8 - 27	27 - 35	3 - 8	6.8/-2.8	1.5/2.5
B-3	3	5	4	0.3 - 3	**NE	NE	3 - 5	2/1	1.9/1.1
B-4	3	5	4	0 - 5	NE	NE	NE	2/3	1.7/1.3
B-5	3	5	4	0.3 - 3	NE	NE	3 - 5	2/1	0.5/2.5
SWM-1	3	10	4	0.3 - 4.5	4.5 - 10	NE	NE	3.3/-0.3	1.4/1.6
SWM-2	3	10	4	0.3 - 2.5	2.5 - 10	NE	NE	4.1/-1.1	0.5/2.5

*Elevation estimated from plan topography. **NE – Not Encountered.

LOG OF BORING NO. B-1

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 6.0 ∇ 6.9 ∇ 1.9
 DATE: 7/11/06 7/11/06 7/12/06
 CAVED (ft): 30 25.5

DATE STARTED: **July 11, 2006**
 DATE COMPLETED: **July 11, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **4.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-4.0	0		Topsoil.	Topsoil: 12 inches.
1	1.0	8	2-2-3	5	3.0	0		Black, moist to wet, loose, Silty SAND/PEAT. (Fill)	
2	3.5	12	5-7-5	12	1.0	5	SW SM	AASHTO: A-2-4/A-8 Dark grey, wet, medium dense, Well-graded SAND with Silt.	
3	6.0	12	2-1-1	2	-1.5	5	PT	AASHTO: A-2-4 Black, wet, soft, PEAT/SILT	
4	8.5	18	1-1-1	2		10		AASHTO: A-8	
5	13.5	18	1-1-1	2		15			
6	18.5	18	1-1-1	2		20			
7	23.5	10	2-2-2	4	-21.0	25	CH	Grey, wet, very stiff to hard, Fat CLAY with Sand. AASHTO: A-7-6	
8	28.5	18	4-6-10	16		30			
9	33.5	18	10-12-20	32		35			
10	38.5	18	8-12-19	31	-33.0		SM	Grey, wet, dense, Silty SAND. AASHTO: A-2-4	
					-36.0			Bottom of Hole.	Bottom of Hole: 40 Feet.

Notes: Elevations Estimated From Plan Topography.

STANDARD LOG OF BORING -55 FEET CROUSE PARK-060826-GEO.GPJ 7/20/06



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. B-1

LOG OF BORING NO. B-2

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ **6.0** ∇ **6.8** ∇ **1.5**
 DATE: 7/11/06 7/11/06 7/12/06
 CAVED (ft): _____ 31.5 13.3

DATE STARTED: **July 11, 2006**
 DATE COMPLETED: **July 11, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **4.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-4.0	0			Topsoil.	Topsoil: 4 Inches.
1	1.0	12	2-2-3	5	3.7	0			Dark grey, moist to wet, loose, Silty SAND/PEAT. (Fill)	
2	3.5	12	12-10-16	16	1.0	5	SW SM		AASHTO: A-2-4/A-8	
3	6.0	3	6-8-4	12	-1.5	5	SM		AASHTO: A-2-4	
4	8.5	8	1-1-2	3	-4.0	10	PT		Dark grey, wet, medium dense, Silty SAND.	
						10			AASHTO: A-2-4	
						15			Black, wet, soft to stiff, PEAT/SILT.	
5	13.5	10	2-1-1	2		15			AASHTO: A-8	
6	18.5	18	1-1-1	2		20				
7	23.5	18	2-1-9	10		25				
					-23.0	25				
8	28.5	18	4-12-11	23		30	CH		Grey, wet, very stiff, Fat CLAY with Sand.	
						30			AASHTO: A-7-6	
9	33.5	18	8-12-13	25	-31.0	35				
						35			Bottom of Hole.	

Bottom of Hole: 40 Feet.

Notes: Elevations Estimated From Plan Topography.

STANDARD LOG OF BORING -55 FEET CROUSE PARK- 060826-GEO.GPJ 7/24/06

GTA
GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. B-3

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 3.0 ∇ 2.0 ∇ 1.9
 DATE: 7/12/06 7/12/06 7/13/06
 CAVED (ft): _____ 2.3 2.9

DATE STARTED: **July 12, 2006**
 DATE COMPLETED: **July 12, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **3.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-3.0	0			Topsoil.	
1	1.0	10	1-2-3	5	2.7	0			Black, moist to wet, loose, Silty SAND/PEAT. (Fill)	Topsoil: 4 Inches.
					0.0					
2	3.5	10	12-19-22	41	-2.0	5	SW SM		AASHTO: A-2-4/A-8 Brown, wet, dense, Well-graded SAND with Silt.	Bottom of Hole: 5 Feet.
									AASHTO: A-2-4 Bottom of Hole.	

Notes: Elevations Estimated From Plan Topography.



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. B-3

STANDARD LOG OF BORING -55 FEET, CROUSE PARK- 060829-GEO.GPJ 7/24/06

LOG OF BORING NO. B-4

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 3.0 ∇ 2.0 ∇ 1.7
 DATE: 7/12/06 7/12/06 7/13/06
 CAVED (ft): _____ 2.1 2.6

DATE STARTED: **July 12, 2006**
 DATE COMPLETED: **July 12, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **3.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-3.0	0			Topsoil.	Topsoil: 4 Inches.
1	1.0	13	1-2-2	4	2.7	1			Black, moist to wet, loose to dense, Well-graded SAND with Silt/PEAT. (Fill)	
2	3.5	13	4-12-21	33	-2.0	5			AASHTO: A-2-4/A-8 Bottom of Hole.	Bottom of Hole: 5 Feet.

Notes: Elevations Estimated From Plan Topography.

STANDARD LOG OF BORING -55 FEET CROUSE PARK- 060826-GEO.GPJ 7/24/06



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. B-4

LOG OF BORING NO. B-5

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 3.0 ∇ 2.0 ∇ 0.5
 DATE: 7/12/06 7/12/06 7/13/06
 CAVED (ft): _____ 2.7 2

DATE STARTED: **July 12, 2006**
 DATE COMPLETED: **July 12, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **3.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-3.0	0			Topsoil.	
1	1.0	8	5-7-17	24	2.7	0			Dark brown, moist to wet, medium dense, Silty SAND. (Fill)	Topsoil: 4 Inches.
					0.0	-				
2	3.5	10	9-8-4	12	-2.0	5	SW SM		AASHTO: A-2-4 Brown, wet, medium dense, Well-graded SAND with Silt.	Bottom of Hole: 5 Feet.
						5			AASHTO: A-2-4 Bottom of Hole.	

Notes: Elevations Estimated From Plan Topography.

STANDARD LOG OF BORING -55 FEET, CROUSE PARK-060829-GEO.GPJ 7/24/06



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. B-5

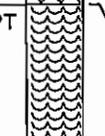
LOG OF BORING NO. SWM-1

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 3.0 ∇ 3.3 ∇ 1.4
 DATE: 7/12/06 7/12/06 7/13/06
 CAVED (ft): _____ 3.3 3.6

DATE STARTED: **July 12, 2006**
 DATE COMPLETED: **July 12, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **3.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (in)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-3.0	0			Topsoil.	
1	1.0	8	2-2-4	6	-2.7	0			Black-brown, moist to wet, loose to medium dense, Well-graded SAND with Silt/PEAT. (Fill)	Topsoil: 4 Inches.
2	3.5	18	5-7-7	14	-1.5	5	PT		AASHTO: A-2-4/A-8 Black, wet, soft, PEAT/SILT.	
3	6.0	14	1-1-1	2		5			AASHTO: A-8 USDA: SILT	
4	8.5	12	1-1-1	2	-7.0	10			Bottom of Hole.	Bottom of Hole: 10 Feet.

STANDARD LOG OF BORING -55 FEET CROUSE PARK-060826-GEO.GPJ 7/24/06

Notes: Elevations Estimated From Plan Topography.



GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. SWM-2

PROJECT: **Crouse Park Redevelopment - Visitor Center**
 PROJECT NO: **060826**
 PROJECT LOCATION: **Caroline County, Maryland**

WATER LEVEL: ∇ 4.0 ∇ 4.1 ∇ 0.5
 DATE: 7/12/06 7/12/06 7/13/06
 CAVED (ft): _____ 6.3 7.3

DATE STARTED: **July 12, 2006**
 DATE COMPLETED: **July 12, 2006**
 DRILLING CONTRACTOR: **EBA**
 DRILLER: **J. Accord**
 DRILLING METHOD: **Hollow Stem Auger**
 SAMPLING METHOD: **Split Spoon**

GROUND SURFACE ELEVATION: **3.0**
 DATUM: **Topo**
 EQUIPMENT: **CME 55 ATV**
 LOGGED BY: **DJR**
 CHECKED BY: **GRS**

SAMPLE NUMBER	SAMPLE DEPTH (ft)	SAMPLE RECOVERY (ft)	SPT BLOWS/6 inches	N (blows/ft)	ELEVATION (ft)	DEPTH (ft)	USCS	GRAPHIC SYMBOL	DESCRIPTION	REMARKS
					-3.0	0			Topsoil.	Topsoil: 4 Inches.
1	1.0	10	3-10-12	22	2.7	0		[Cross-hatch symbol]	Black, moist to wet, medium dense, Well-graded SAND with Silt/PEAT. (Fill)	
2	3.5	8	2-1-2	3	0.5	5	PT	[Wavy symbol]	AASHTO: A-2-4/A-8 Black, wet, soft, PEAT/SILT.	
3	6.0	10	1-1-1	2		10			AASHTO: A-8 USDA: SILT	
4	8.5	18	1-1-2	3	-7.0	10			Bottom of Hole.	Bottom of Hole: 10 Feet.

Notes: Elevations Estimated From Plan Topography.

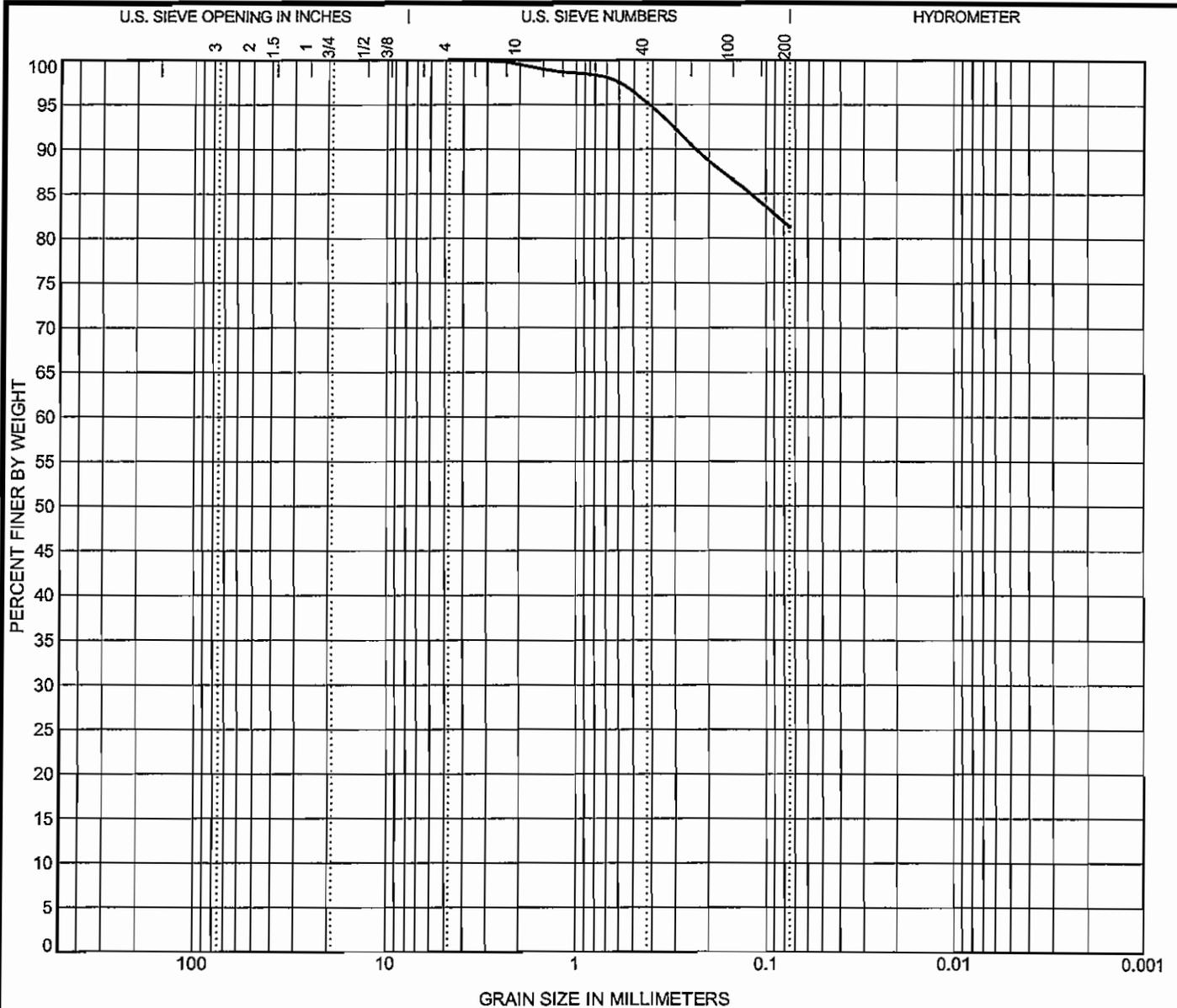


GEO-TECHNOLOGY ASSOCIATES, INC.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

LOG OF BORING NO. SWM-2

STANDARD LOG OF BORING -55 FEET CROUSE PARK- 060826-GEO.GPJ 7/24/06

APPENDIX C
LABORATORY DATA



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

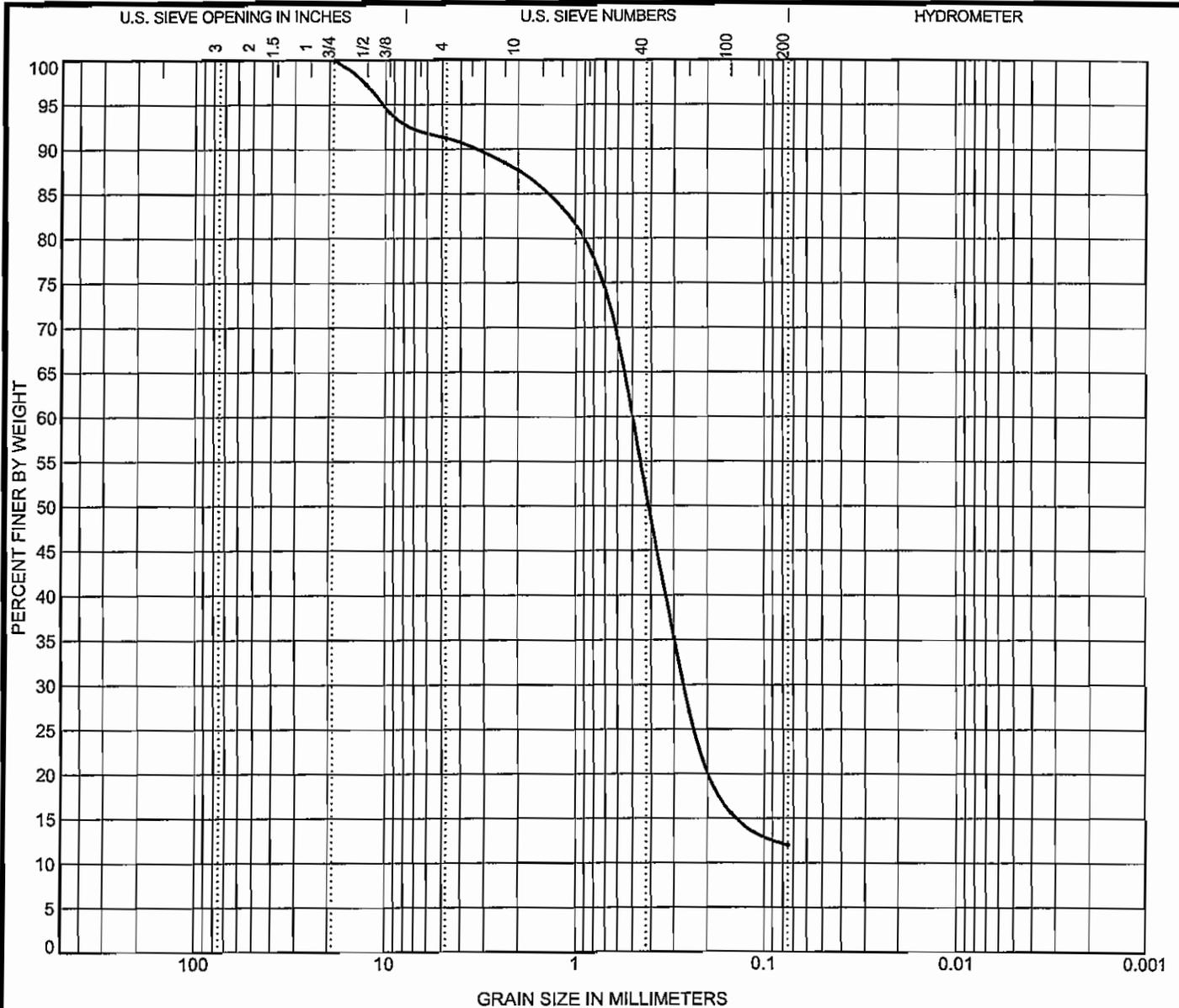
Specimen Identification		Classification				LL	PL	PI	Cc	Cu
●	B-1 28.5-30	FAT CLAY with SAND(CH)				54	21	33		
USCS Classification		FAT CLAY with SAND(CH)								
AASHTO Classification		A-7-6								
MD SHA Classification										
Specimen Identification		D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay	
●	B-1 28.5-30	4.75				0.0	18.7	81.3		
Natural Moisture Content		39.6								

GSA/SHA CROUSE PARK-060826-GEO.GPJ 7/20/06



Geo-Technology Associates, Inc.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

GRAIN SIZE DISTRIBUTION
 Project: Crouse Park Redevelopment - Visitor Center
 Location: Caroline County, Maryland
 Number: 060826



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

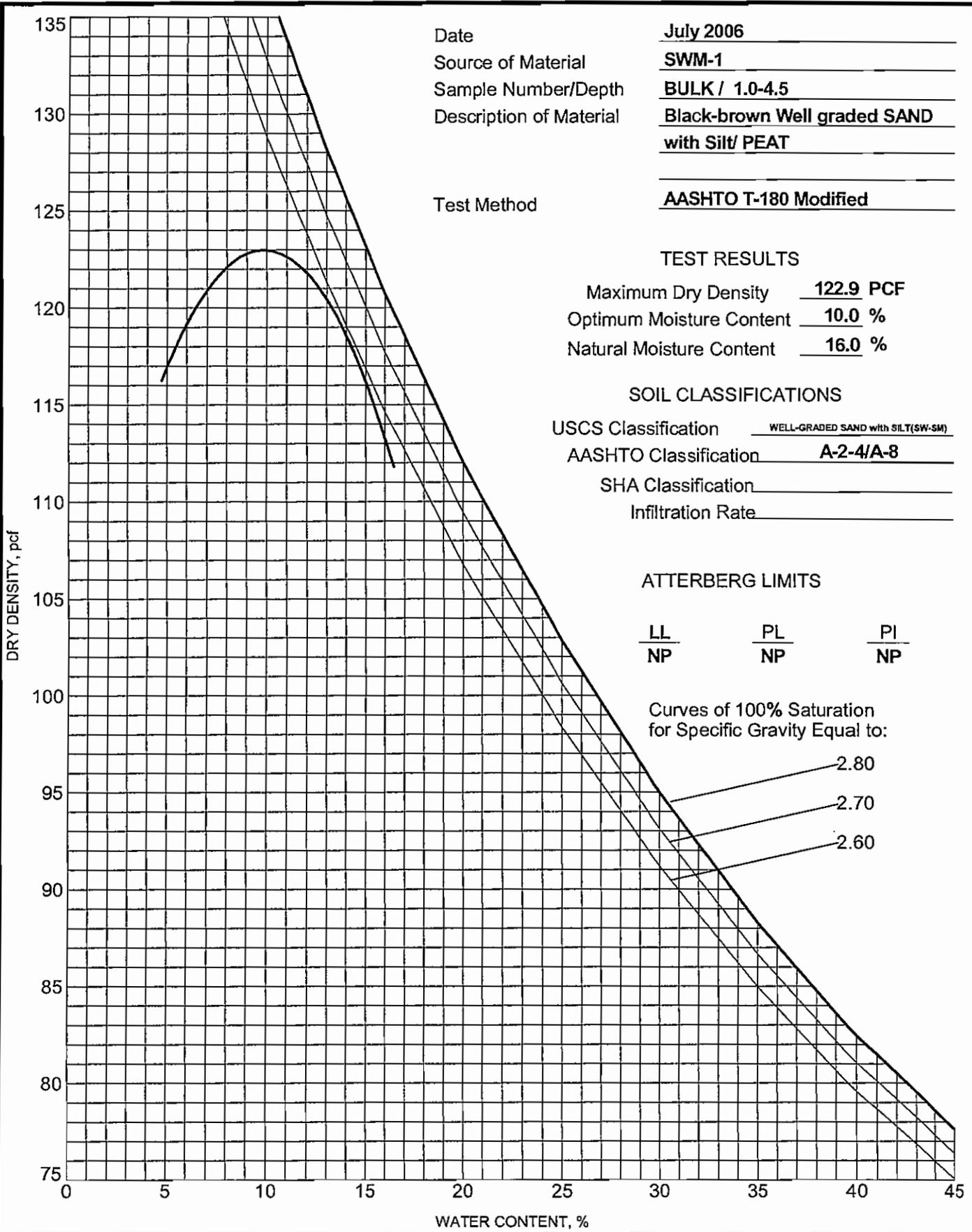
Specimen Identification	Classification					LL	PL	PI	Cc	Cu
● SWM-1 1.0-4.5	Black-brown Well graded SAND with Silt/ PEAT					NP	NP	NP	2.77	9.82
USCS Classification	WELL-GRADED SAND with SILT(SW-SM)									
AASHTO Classification	A-2-4/A-8									
MD SHA Classification										
Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay		
● SWM-1 1.0-4.5	19	0.503	0.267		8.7	79.3		12.0		
Natural Moisture Content	16.0									

GSA/SHA CROUSE PARK- 060829-GEO.GPJ 7/20/06



Geo-Technology Associates, Inc.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

GRAIN SIZE DISTRIBUTION
 Project: Crouse Park Redevelopment - Visitor Center
 Location: Caroline County, Maryland
 Number: 060826



Date July 2006
 Source of Material SWM-1
 Sample Number/Depth BULK / 1.0-4.5
 Description of Material Black-brown Well graded SAND with Silt/ PEAT
 Test Method AASHTO T-180 Modified

TEST RESULTS
 Maximum Dry Density 122.9 PCF
 Optimum Moisture Content 10.0 %
 Natural Moisture Content 16.0 %

SOIL CLASSIFICATIONS
 USCS Classification WELL-GRADED SAND with SILT(SW-SM)
 AASHTO Classification A-2-4/A-8
 SHA Classification _____
 Infiltration Rate _____

ATTERBERG LIMITS

LL	PL	PI
NP	NP	NP

Curves of 100% Saturation for Specific Gravity Equal to:
 2.80
 2.70
 2.60

PROCTOR/SHA CROUSE PARK-060828-GEO.GPJ 7/20/06

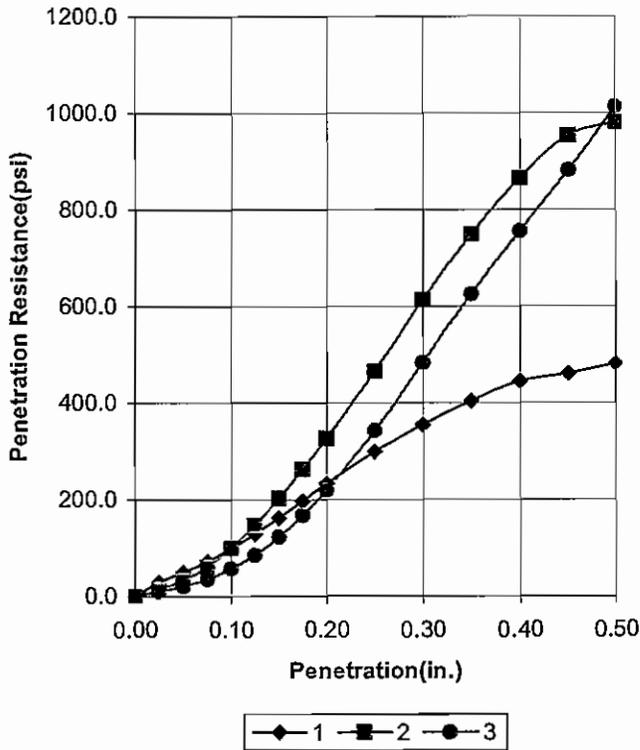


Geo-Technology Associates, Inc.
 3 Sterling Square, Suite 6
 Georgetown, Delaware 19947

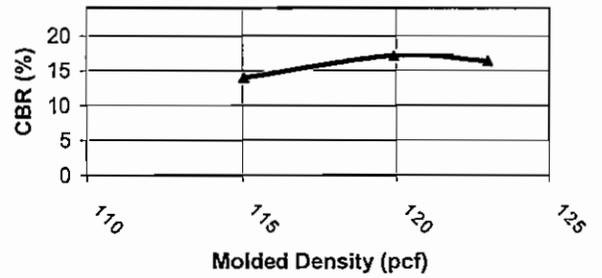
MOISTURE-DENSITY RELATIONSHIP

Project: Crouse Park Redevelopment - Visitor Center
 Location: Caroline County, Maryland
 Number: 060826

Penetration Results



CBR Values for 0.1 in. Penetration



CBR at 97% compaction = 16%

Point	Molded			Soaked			CBR, %		Line Correction	Pen. Sur. lbs	Swell %
	Density	%Max	%Moist	Density	%Max	%Moist	0.1 in	0.2 in			
1	115.1	93.6%	10.7%	115.1	93.6%	11.0%	14.0	18.6	0.0331	10	0.0%
2	119.9	97.6%	11.7%	120.1	97.7%	10.5%	17.1	22.8	0.0395	10	-0.2%
3	123.0	100.1%	11.7%	123.3	100.3%	10.2%	16.3	21.8	0.0728	10	-0.2%
Specimen Identification			Classification			Maximum Dry Density (pcf)	Optimum Moisture	LL (%)	PI (%)		
SWM_1 (1' - 4.5') Black-brown Well-graded SAND with Silt/PEAT			USCS SW-SM AASHTO A-2-4/A-8			122.9	10.0%	NP	NP		

Remarks: Test performed in accordance with ASTM 1883, Proctor Results based on ASTM D 1557 (Modified)



Geo-Technology Associates, Inc.
3 Sterling Square, Suite 6
Georgetown, Delaware 19947
Telephone: (302) 855-9761
Fax: (302) 856-3388

CALIFORNIA BEARING RATIO

Project: Crouse Redevelopment - Visitor Center
Location: Caroline County, Maryland
Number: 060826

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor



Martin G. Madden
Chairman

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

April 11, 2006

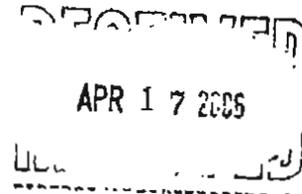
Ms. Jennifer Shull
Housing and Community Development
13 N Third Street
Denton, Maryland 21629

Dear Ms. Shull:

At the April 5, 2006 meeting, the Critical Area Commission unanimously approved the conditional approval request for the Crouse Park Visitor Center. If the proposed plans change in any way, please contact me as changes may need to be reviewed by the Commission.

Sincerely,

Regina A. Esslinger, Chief
Project Evaluation Division



RAE/ijd

cc: Roby Hurley
DE188-06

F.Y.I. Approval to intrude into 100' Buffer



Doldon W. Moore, Jr.
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320

Martin O'Malley
Governor

Nancy K. Kopp
Treasurer

Peter Franchot
Comptroller

Sheila C. McDonald
Executive Secretary

October 17, 2011

Town of Denton – Collins
c/o Sustainable Science – McCullough
410 S. Second St.
Denton, MD 21629

Dear Applicant(s):

RE: Wetlands License No. 11-0470, Choptank River, Caroline County

Enclosed please find the original and one copy of the above-mentioned wetlands license issued to you on September 7, 2011.

After you have read all the conditions of the license, please ensure that the license is signed by the named licensee and the entire original (including plans) is returned to this office within 15 days in the enclosed envelope. Please retain the copy of the license for your records. This license is valid for a period of three years, as indicated on page three.

Please note that you must notify the MD Department of the Environment, Inspections and Compliance Program, by calling (410) 537-3510 in Baltimore, or (410) 901-4020 in Cambridge, prior to commencing work.

This does not constitute your federal authorization. Please contact the U.S. Army Corps of Engineers, Baltimore District, at (410) 962-4500 (Maryland Section Southern) or (410) 962-4252 (MD Section Northern) regarding the status of the federal permit, if it has not been received.

If you have any questions concerning any of the terms and conditions of the attached license, please contact me at the address or telephone number shown above.

Sincerely,

Doldon W. Moore, Jr.
Wetlands Administrator

Enclosure

cc: MDE, Tidal Wetlands Division



Doldon W. Moore, Jr.
Wetlands Administrator

State of Maryland
Board of Public Works

Wetlands Administration
Post Office Box 1510
Annapolis, Maryland 21404
410-260-7791
Fax: 410-974-5240
Toll Free: 1-877-591-7320

Martin O'Malley
Governor

Nancy K. Kopp
Treasurer

Peter Franchot
Comptroller

Sheila C. McDonald
Executive Secretary

WETLANDS LICENSE NO. 11-0470

TOWN OF DENTON

In response to an application dated February 3, 2011, for a Wetlands License, upon the recommendation of the Wetlands Administrator of the Board of Public Works, and pursuant to the provisions of Title 16, Environment Article, Annotated Code of Maryland (1996 Repl. Vol. and Supplement), entitled "Wetlands and Riparian Rights," enacted to provide a State policy for the preservation of wetlands and regulation of the filling and dredging of wetlands in Maryland, and for other purposes, you are hereby authorized by the Board of Public Works, for the State of Maryland to:

"Fill, grade, and plant marsh vegetation along 270 feet of eroding shoreline with 490 cubic yards of sand emplaced within a maximum of 20 feet channelward of the mean high water line;

To remove historical concrete rubble in two areas totaling 3,956 square feet and allow natural recolonization of wetland plants; and

To construct a wharf consisting of a 45-foot long platform of varying widths up to 20 feet wide, an 82-foot long by 10-foot wide platform, and a 54-foot long by 21-foot wide platform all extending a maximum of 21 feet channelward of the mean high water line as depicted on the attached plans dated January 31, 2011 and revised August 5, 2011."

Choptank River at the south side of Crouse Park, Denton, Caroline County

This license is subject to the following special conditions:

- A. All work shall be permitted under, and performed in accordance with, the Critical Area requirements of the local jurisdiction where the project is located. This authorization does not constitute authorization for disturbance in the 100-foot Critical Area Buffer. "Disturbance" in the Buffer means clearing, grading, construction activities, or removal of any size of tree or vegetation. Any anticipated Buffer disturbance requires prior written approval, before commencement of land-disturbing activity, from the local jurisdiction in the form of a Buffer Management Plan.
- B. All work exceeding 5,000 square feet of earth disturbance or 100 cubic yards of fill shall be performed in accordance with a Soil Erosion and Sediment Control Plan approved by the Caroline County Soil Conservation District.

Tidal Wetlands License No. 11-0470
Town of Denton
September 7, 2011

- 1A -

- C. All work shall be performed in accordance with the required Water Quality Certification issued by the Maryland Department of the Environment and in accordance with the Maryland State Programmatic General Permit (MDSPGP-3) or the U.S. Army Corps of Engineers' Individual Authorization.
- D. No marsh shall be filled, dredged, or otherwise altered or destroyed.
- E. The Maryland Department of Environment has determined that the proposed activity complies with, and will be conducted in a manner consistent with, the State's Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended.
- F. All work performed under this tidal wetlands license shall be conducted by the property owner or by a marine contractor registered with the Maryland Department of the Environment in accordance with Chapter 286 of the 2010 Laws of Maryland. A list of registered marine contractors can be obtained by contacting the Department at 410-537-3837 or by visiting the department's website at: http://www.mde.state.md.us/programs/water/wetlandsandwaterways/documents/marinecontractor_registered_list.pdf.
- G. All construction must be performed in accordance with the Waterways regulations and National Flood Insurance Program requirements.
- H. Prior to any boat being moored at the facility, the licensee shall certify to the Water Management Administration, Tidal Wetlands Division, that dockside sewage pump out facilities to accommodate sewage from vessels using the applicant's marina are installed, operated, and maintained. The facilities shall be connected to a public sewage treatment system serving the area or to an on-site sewage disposal system sized, installed, and operated in compliance with the requirements of the Caroline County Health Department.
- I. The licensee shall monitor the mitigation site for a period of three years following construction. By December 31 of each year, the licensee shall submit a report to the Tidal Wetlands Division verifying that the wetland construction has been successful. A project shall be considered successful if there is a survival rate of 85% of the plants in forested and scrub/shrub wetlands and if plants cover 85% of the surface area for emergent wetlands. If these standards are not met, the licensee shall determine the reason(s) for failure, correct the problem(s), and replant the project.
- J. No in-water work shall be performed from February 15 through April 15 of any year.

Tidal Wetlands License No. 11-0470
Town of Denton
September 7, 2011

- 1B -

K. Marsh establishment:

1. The licensee shall use clean substrate fill material, no more than 10% of which shall pass through a standard number 100 sieve.
2. The marsh establishment area shall be planted within one year following completion of the filling operation.
3. The marsh establishment project shall be maintained as a wetland, with non-nuisance species' aerial coverage of at least 85% for three consecutive years. If 85% coverage is not attained, the reasons for failure shall be determined, corrective measures shall be taken, and the area shall be replanted.
4. If the fill is graded hydraulically, the licensee shall use a turbidity curtain around the perimeter of the in-stream work.
5. If the existing bank is to be cleared or graded, the licensee shall obtain any required approvals of an erosion and sediment control plan from the applicable sediment and erosion control agency.

The authorized work is to be accomplished in accordance with the plans and drawings attached hereto, dated January 31, 2011 and revised August 5, 2011.

This license is subject to the following general conditions and is revocable or subject to modification prior to the completion of the project as described above when such action is deemed to be in the State's interest.

This license is subject to the following standard conditions:

- a. This license does not authorize a trespass or infringement upon private or public property rights or interests, nor does it relieve the licensee of the obligation to obtain applicable federal, State, or local approvals.
- b. The legal requirements of all federal, State, and local agencies shall be met.
- c. The license does not transfer a property interest of the State unless expressly stated by the Board of Public Works (usually in a separate document).
- d. The licensee shall allow full and free use by the public of State wetlands and navigable waters.
- e. A copy of this license and the plans or drawings attached hereto shall be available at the site until the construction or activity is complete.
- f. The licensee shall submit written notification to the Inspections and Compliance Program of the MD Department of the Environment at least 10 days in advance of commencing the construction or activity, and shall furnish written notification of the date of its completion within 30 days.
- g. The licensee consents to reasonable inspections by representatives of the Board of Public Works or the MD Department of the Environment to ensure consistency with the conditions of the license.
- h. The licensee shall comply promptly with any lawful regulations, conditions, or site complaints and orders affecting the structure or activity authorized herein, if and when issued by the MD Department of the Environment, which is authorized to enforce this license.
- i. The licensee shall maintain the structure authorized herein in good condition or perform the activity in accordance with the approved plans or drawings and otherwise comply with all license provisions until the structure is removed or the activity permanently ceases.
- j. The Board of Public Works or the Wetlands Administrator may modify, suspend, or revoke this license as necessary to protect the State's interests. The decision to modify, suspend, or revoke the license shall be based upon a consideration of the ecological, economic, developmental, recreational, and aesthetic values involved as they may affect the public and proprietary interests of the State.

- k. Any modification, suspension, or revocation of this license shall not be the basis for a claim for damages against the State of Maryland, or any unit or agency of the State.
- l. All provisions of this license shall be binding on any assignee or successor in interest of the licensee, with the procedure for assignment or transfer set by the Board of Public Works.
- m. The licensee or any successor or assignee agrees to make every reasonable effort to construct the structure or perform the activity authorized herein in a workmanlike manner so as to eliminate or minimize any adverse effects of the construction or activity on fish, wildlife and natural environmental values.
- n. The licensee agrees to indemnify, defend and save harmless the State of Maryland, its elected officials, officers and employees from and against any and all liability, suits, claims and actions of whatsoever kind, caused by or arising from the placement of fill and/or piles or construction of structures in the waters of the State pursuant to this wetlands license.
- o. If the structure or activity authorized herein is not completed on or before the 7th day of September, 2014, this license, if not previously revoked or specifically extended, shall cease and be null and void. **NOTE:** In most cases, a 3-year license may be renewed for one additional 3-year period if the request is received prior to the expiration date; 6-year licenses cannot be renewed and licensee must reapply to the Maryland Department of Environment.

By the authority of the Board of Public Works:

Issued for and in behalf of
the Members of the Board



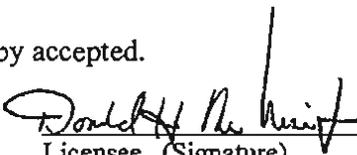
Sheila C. McDonald
Executive Secretary

Effective Date: September 7, 2011

The terms and conditions of this license are hereby accepted.

11/4/2011

Date

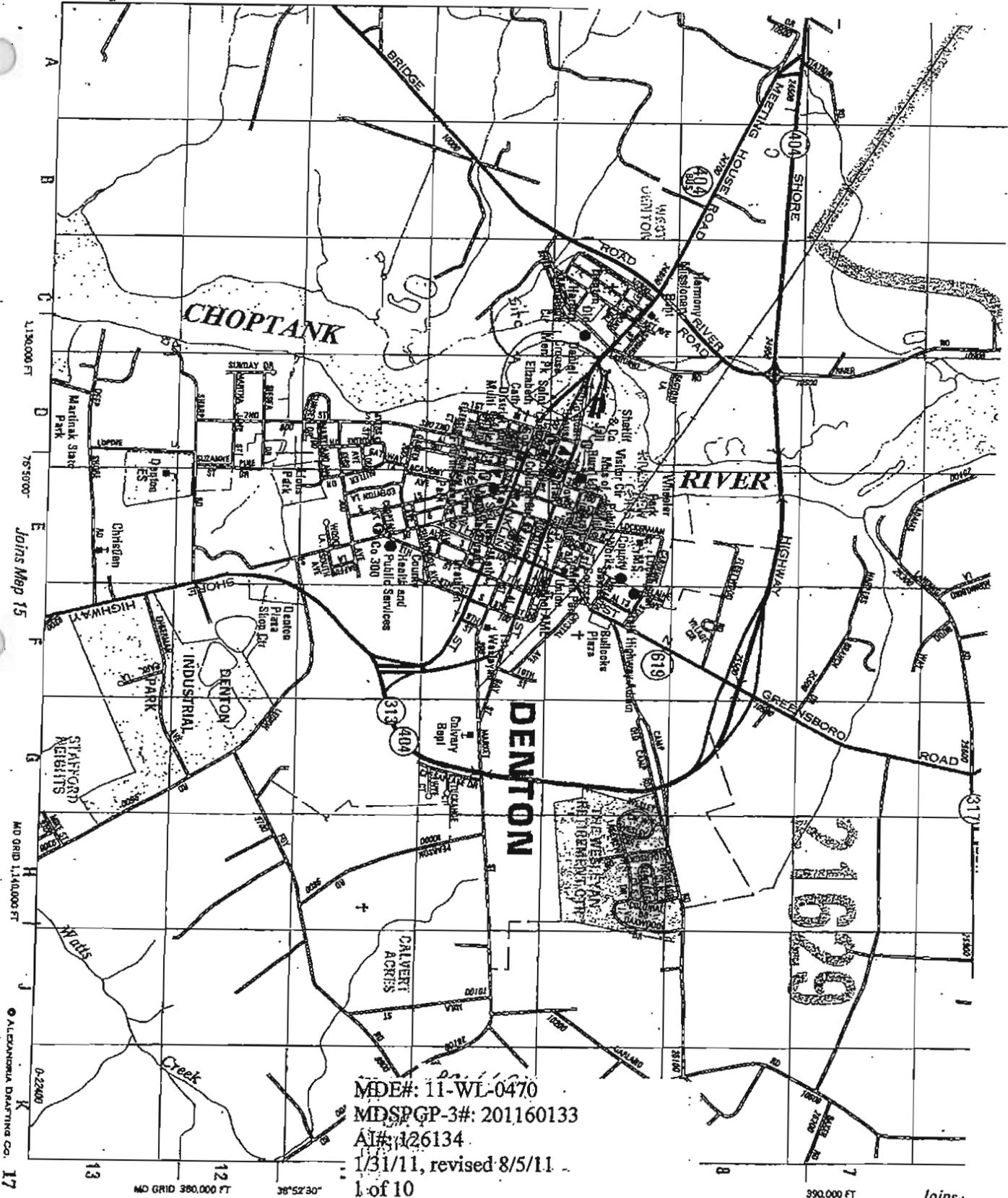


Licensee (Signature)

Donald H Melnick Jr

Printed Name

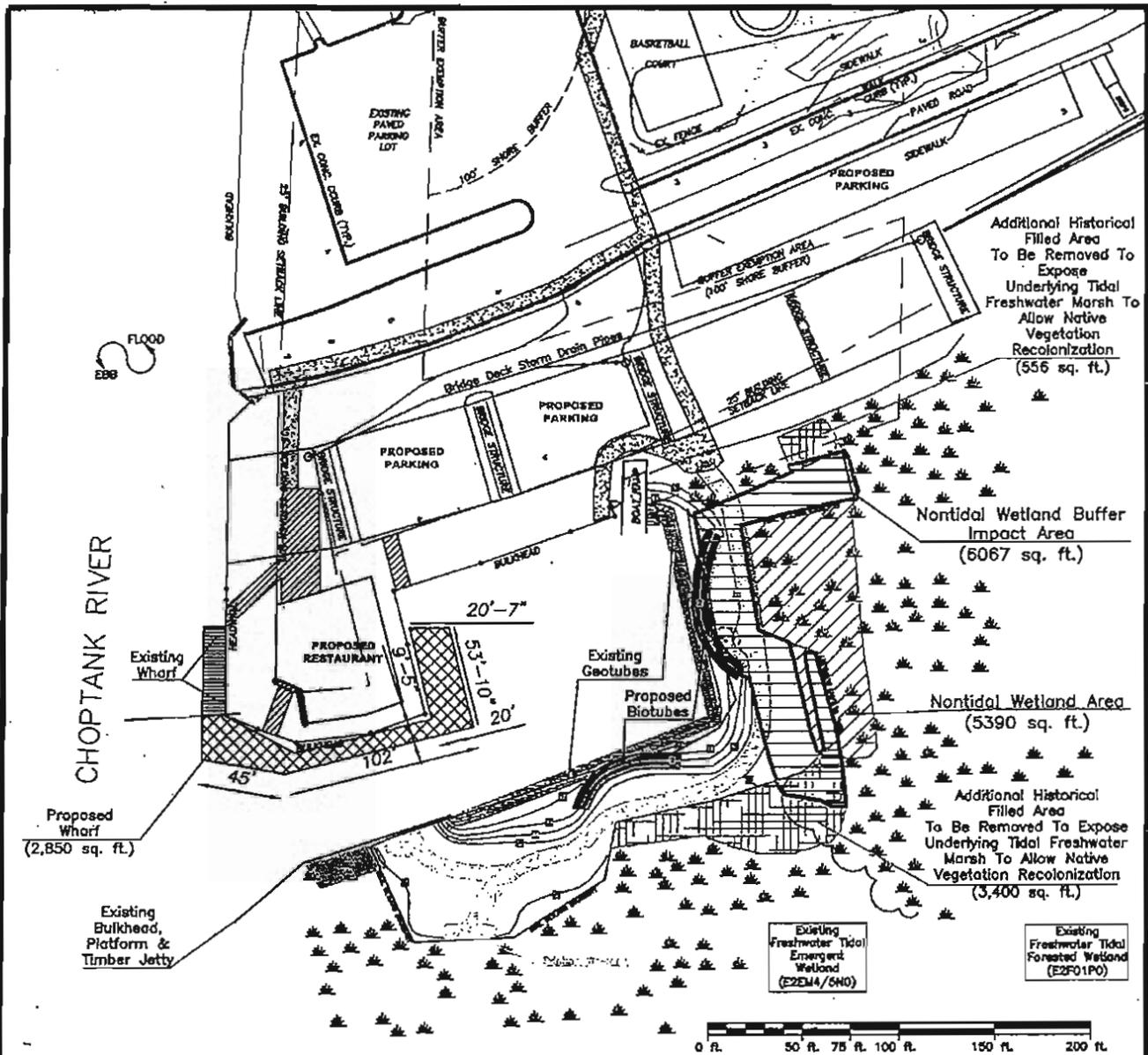
**Approved by the Board of
Public Works on the 7th day
of September, 2011, as Item 3 on
the Secretary's Agenda.**



MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 A1#: 126134
 1/31/11, revised 8/5/11
 1 of 10

Joins Map 15
 MD GRID 1,140,000 FT
 MD GRID 380,000 FT
 © ALEXANDRIA DRAFTING CO. 17

Joins



NOTES:

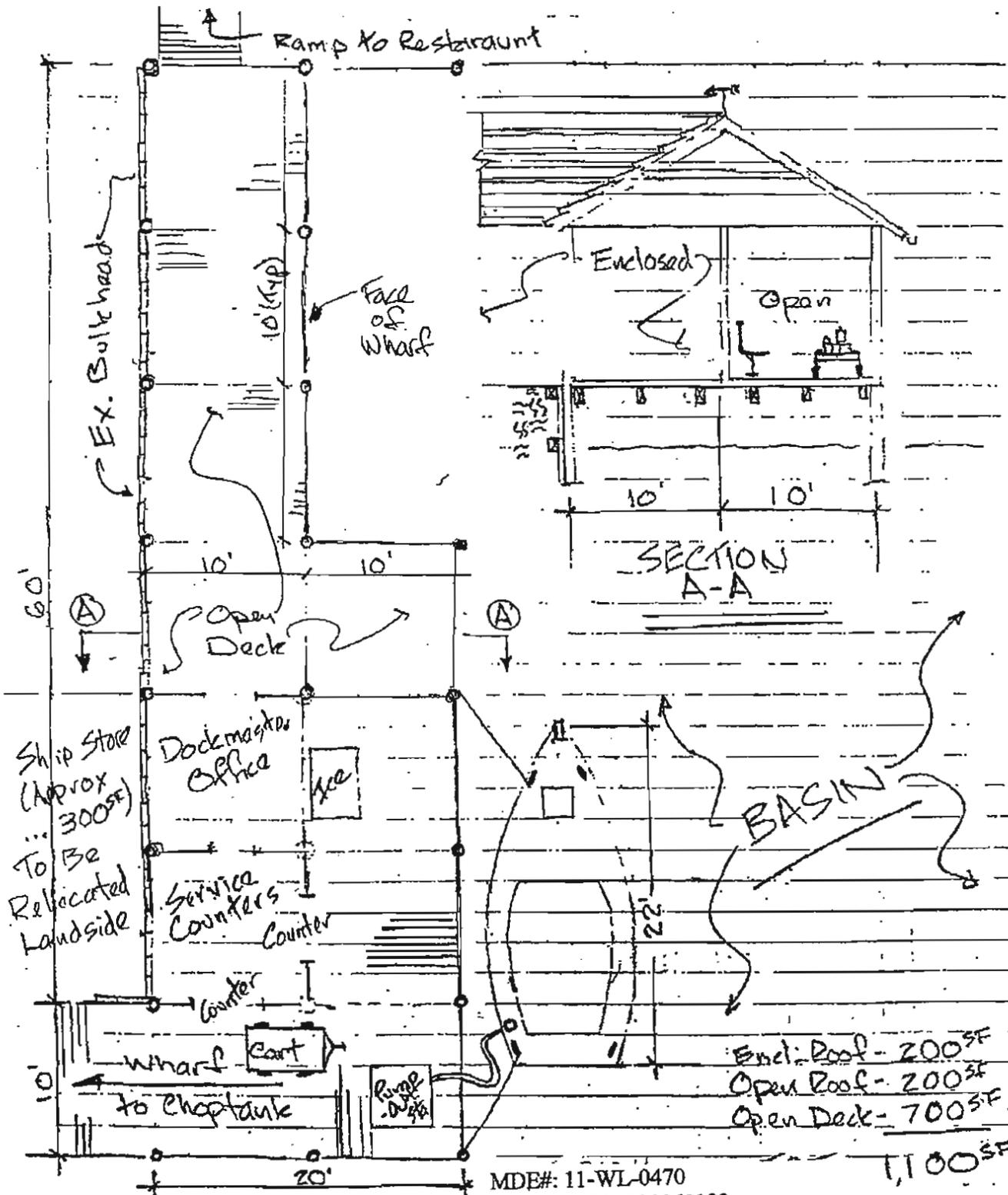
- 1) Base topographic, physical features and tidal wetland boundary obtained from plan entitled SHEET NO. 1 OF 1; TOPOGRAPHIC WORKSHEET; ON THE LANDS OF COMMISSIONERS OF DENTON; THIRD ELECTION; CAROLINE COUNTY, MARYLAND dated April, 2002 by McCrone, Inc. CAD file 01421-T transmitted to Sustainable Science LLC on December 27th, 2004.
- 2) Bathymetry information obtained from plan entitled CROUSE PARK CAROLINE COUNTY HYDRO SURVEY dated 8/21/03 with survey dated 7/22/03 & 8/12/03 by State of Maryland Department of Natural Resources Engineering and Construction Division.
- 3) Additional fill areas, nontidal wetland areas and 1972 Maryland Wetland Map line determined during field review with representatives from Maryland Department of the Environment Tidal and Nontidal Wetland Divisions and State of Maryland Critical Areas on October 26th, 2007.
- 4) Crouse Park design based upon information described in Note 1 & 2.

TIDAL PERMIT PLAN
 Crouse Park Redevelopment
 Shoreline Enhancement Construction
 Denton, Maryland

SUSTAINABLE SCIENCE LLC
Ecological Engineering Services
 110 S. Second Street
 Denton, Maryland 21620
 Phone: (410) 924-4318
 www.sustainable-science.com

MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 AI#: 126134
 1/31/11, revised 8/5/11
 2 of 10

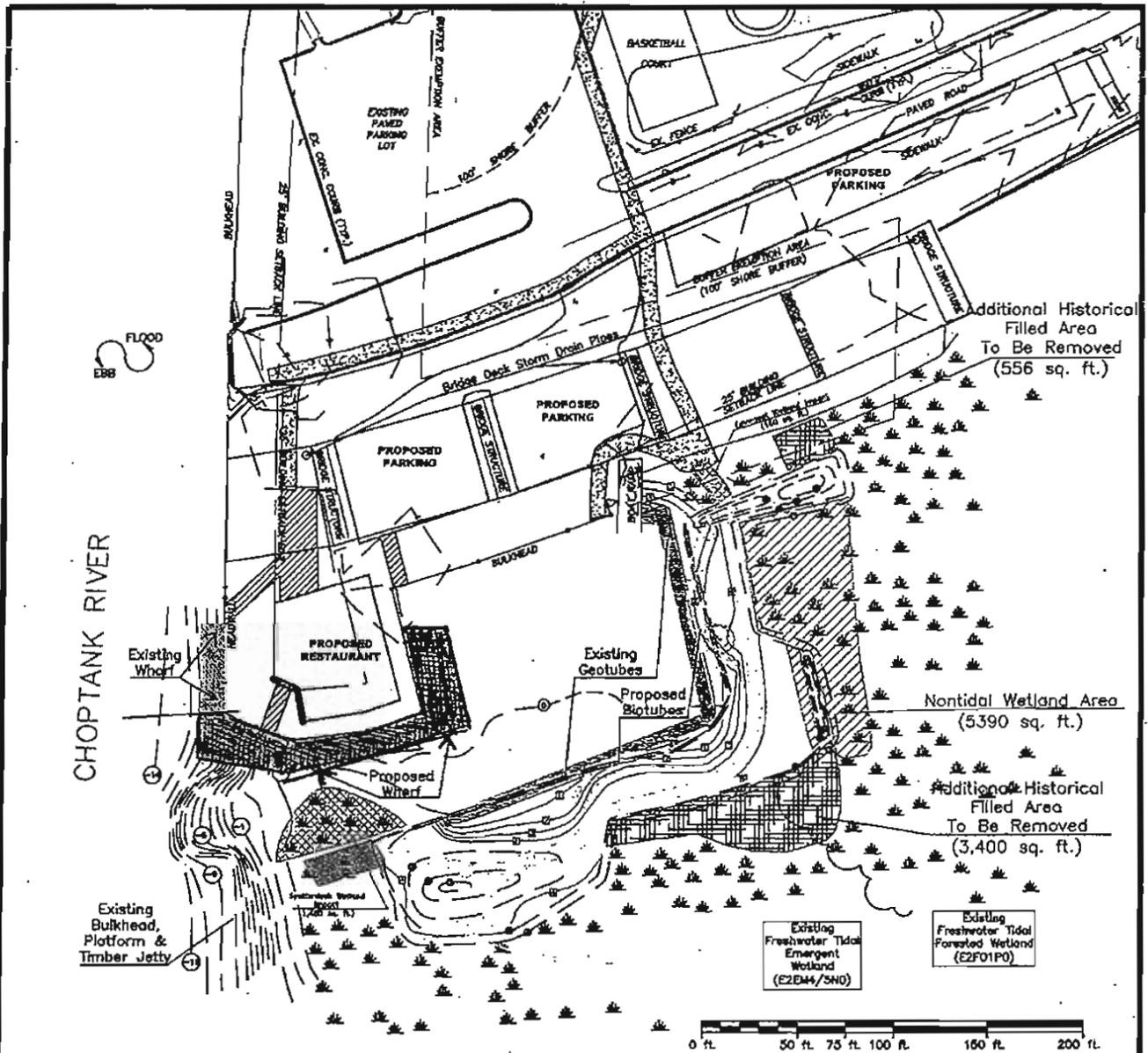
Service Area #2 (On Marina Basin)



Encl. Roof - 200 SF
 Open Roof - 200 SF
 Open Deck - 700 SF
1,100 SF

MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 AI#: 126134
 1/31/11, revised 8/5/11
 4 of 10





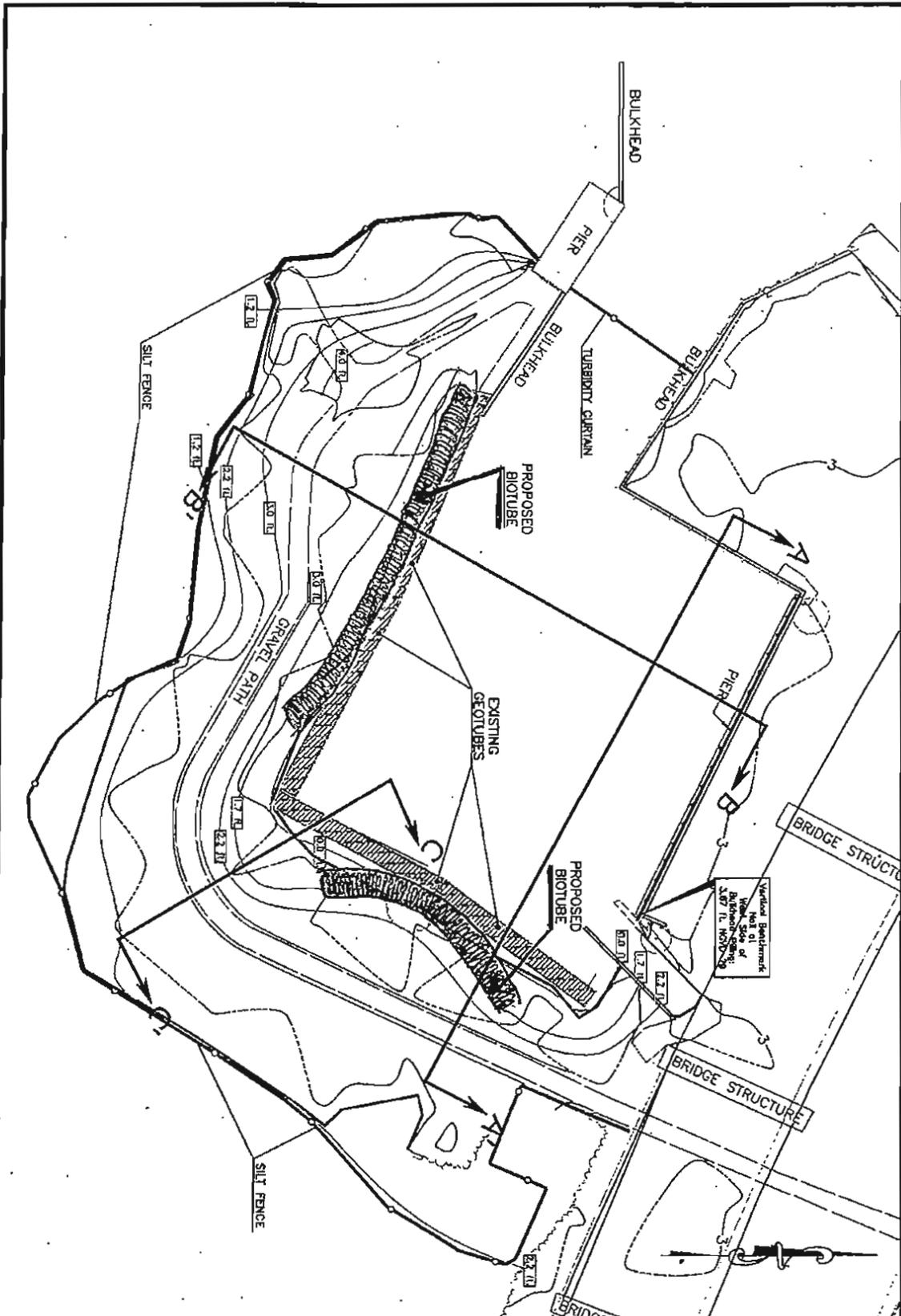
NOTES:

- 1) Base topographic, physical features and tidal wetland boundary obtained from plan entitled SHEET NO. 1 OF 1; TOPOGRAPHIC WORKSHEET; ON THE LANDS OF COMMISSIONERS OF DENTON; THIRD ELECTION; CAROLINE COUNTY, MARYLAND dated April, 2002 by McCrone, Inc. CAD file 01421-T transmitted to Sustainable Science LLC on December 27th, 2004.
- 2) Bathymetry information obtained from plan entitled CROUSE PARK CAROLINE COUNTY HYDRO SURVEY dated 8/21/03 with survey dated 7/22/03 & 8/12/03 by State of Maryland Department of Natural Resources Engineering and Construction Division.
- 3) Additional fill areas, nontidal wetland areas and 1972 Maryland Wetland Map line determined during field review with representatives from Maryland Department of the Environment Tidal and Nontidal Wetland Divisions and State of Maryland Critical Areas on October 26th, 2007.
- 4) Crouse Park design based upon information described in Note 1 & 2.

TIDAL PERMIT PLAN
 Crouse Park Redevelopment
 Shoreline Enhancement Construction
 Denton, Maryland


SUSTAINABLE SCIENCE LLC
 Ecological Engineering Services
 410 S. Second Street
 Denton, Maryland 21629
 Phone: (410) 924-4518
 www.sustainable-science.com

MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 AI#: 126134
 1/31/11, revised 8/5/11
 5 of 10



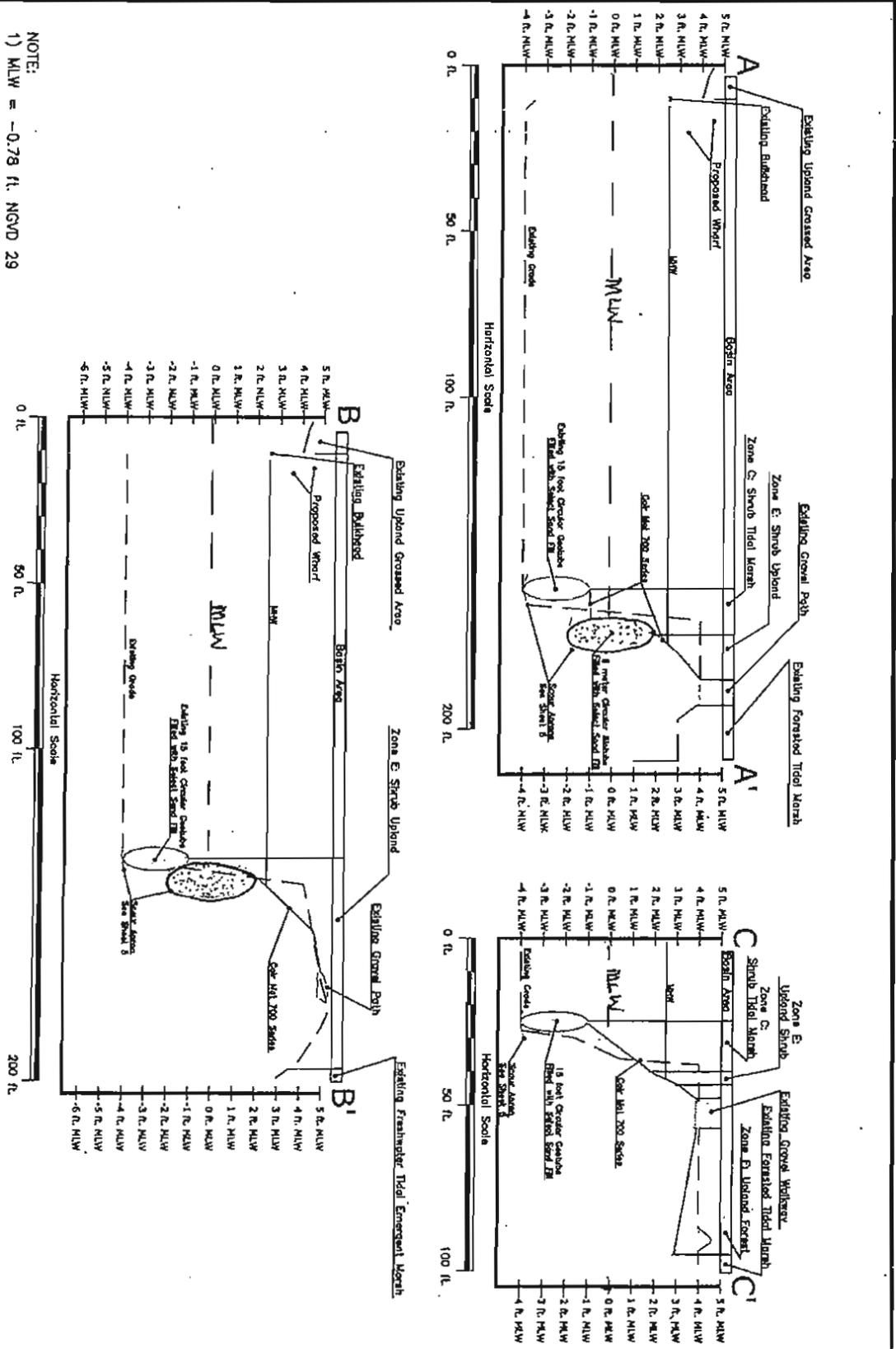
SEDIMENT & EROSION AND GRADING PLAN

Crouse Park Redevelopment
Phase IC
Boat Basin Enhancement Construction
Denton, Maryland

SUSTAINABLE SCIENCE LLC
Ecological Engineering Services
 410 S. Second Street
 Denton, Maryland 21520
 Phone: (410) 824-4316
 www.sustainable-science.com

MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 AI#: 126134
 1/31/11, revised 8/5/11
 6 of 10

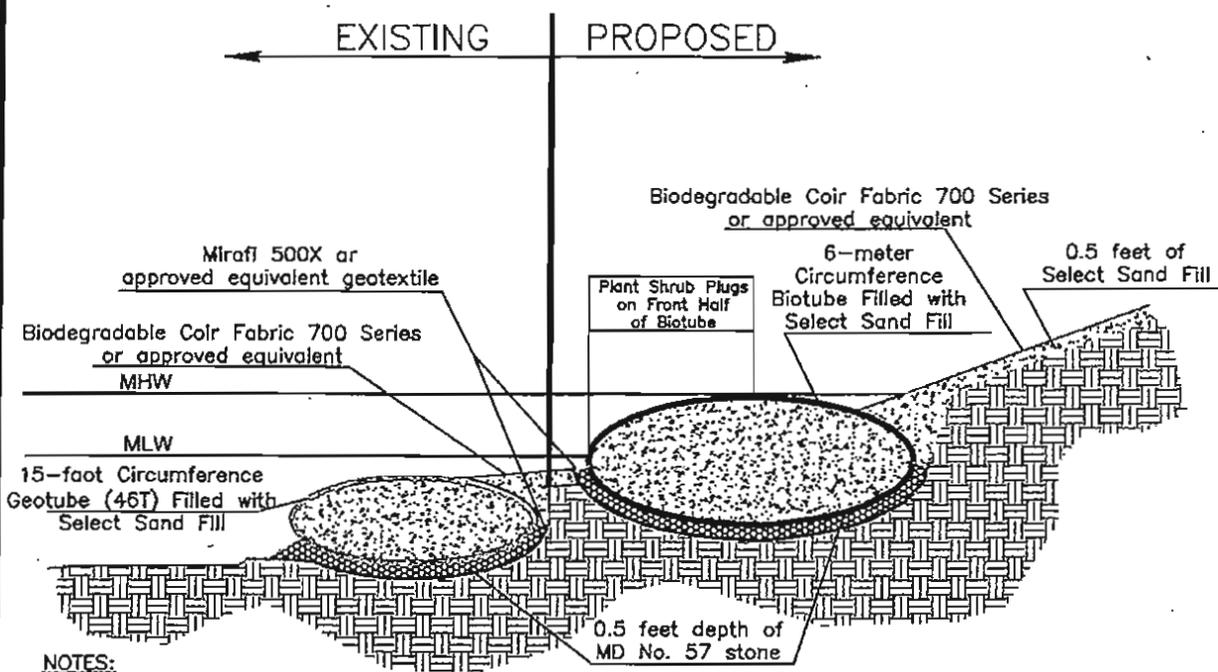
NOTE:
1) MLW = -0.78 ft. NGVD 29



CROSS-SECTIONS
Crouse Park Redevelopment
Phase IC
Boat Basin Enhancement Construction
Denton, Maryland

SUSTAINABLE SCIENCE LLC
Ecological Engineering Services
110 S. Second Street
Denton, Maryland 21649
Phone: (410) 324-4316
www.sustainable-science.com

MDE#: 11-WL-0470
MDSPGP-3#: 201160133
AI#: 126134
1/31/11, revised 8/5/11
7 of 10



NOTES:

- 1) Select Sand Fill shall be comprised of clean washed sand with no more than ten (10) percent passing by weight the No. 200 sieve.
- 2) Slope to be graded to 0.5 feet below grades shown on grading plan with areas to receive geotube and biotubes C-bed graded.
- 3) Geotextile shall be placed and No. 57 stone placed prior to placing biotube and geotube.
- 4) Geotube and biotube shall be completely filled with Select Sand Fill in fill tubes. Fill tubes shall be tied off after filling operations are complete.

GEOTUBE AND BIOTUBE DETAIL
Not to Scale

BIOTUBE DETAIL

Crouse Park Redevelopment
Shoreline Enhancement Construction
Denton, Maryland


SUSTAINABLE SCIENCE LLC
Ecological Engineering Services
 +10 S. Second Street
 Denton, Maryland 21029
 Phone: (+1) 321-4316
 www.sustainable-science.com

MDE#: 11-WL-0470
 MDSPGP-3#: 201160133
 AI#: 126134
 1/31/11, revised 8/5/11
 8 of 10

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION
AUTHORIZATION TO PROCEED

AUTHORIZATION NUMBER: 201260851/12-NT-2041

EFFECTIVE DATE: December 13, 2012

EXPIRATION DATE: December 13, 2015

AUTHORIZED PERSON: Town of Denton
13 North 3RD Street
Denton, Maryland 21629
Attention: Donald Mulrine



IN ACCORDANCE WITH ENVIRONMENT ARTICLE §5-503(a) AND §5-906(b), ANNOTATED CODE OF MARYLAND (2007 REPLACEMENT VOLUME), COMAR 26.17.04 AND 26.23.01, AND 26.08.02 AND THE ATTACHED CONDITIONS OF AUTHORIZATIONS, **Town of Denton** ("AUTHORIZED PERSON"), IS HEREBY AUTHORIZED BY THE WATER MANAGEMENT ADMINISTRATION ("ADMINISTRATION") TO CONDUCT A REGULATED ACTIVITY IN A NONTIDAL WETLAND, BUFFER, OR EXPANDED BUFFER, AND/OR TO CHANGE THE COURSE, CURRENT OR CROSS-SECTION OF WATERS OF THE STATE, IN ACCORDANCE WITH THE ATTACHED PLANS APPROVED BY THE ADMINISTRATION ON December 13, 2012 ("APPROVED PLAN") AND PREPARED BY **Kercher Engineering, Inc.** AND INCORPORATED HEREIN, AS DESCRIBED BELOW:

The proposed work includes construction of a Heritage and Welcome Center. The proposed work will permanently impact 44715 sq-ft or 914 cu-yds in the 100-year floodplain and temporarily impact 19800 sq-ft in the 100-year floodplain. The project is located at the northeast corner of MD Route 404 and the Choptank River, Denton, Maryland, 221629 in Caroline County.

MD Grid Coordinates: N136266/E500883

William Seiger
Division Chief
Waterway Construction Division

Attachments: Conditions of Authorization
Best Management Practices
8 ½ x 11 Plan Views

cc: WMA Compliance Division Caroline County w/ file
Alan Kampmeyer, MDE Nontidal Wetlands Division

RECEIVED
JAN 08 2013
T.O.P

1. **Validity:** Authorization is valid only for use by Authorized Person. Authorization may be transferred only with prior written approval of the Administration. In the event of transfer, transferee agrees to comply with all terms and conditions of Authorization.
2. **Initiation of Work, Modifications and Extension of Term:** Authorized Person shall initiate authorized activities with two (2) years of the Effective Date of this Authorization or the Authorization shall expire. Authorized Person may submit written requests to the Administration for (a) extension of the period for initiation of work, (b) modification of Authorization, including the Approved Plan, or, (c) not later than 45 days prior to Expiration Date, an extension of the term. Requests for modification shall be in accordance with applicable regulations and shall state reasons for changes, and shall indicate the impacts on nontidal wetlands, streams, and the floodplain, as applicable. The Administration may grant a request at its sole discretion.
3. **Responsibility and Compliance:** Authorized Person is fully responsible for all work performed and activities authorized by this Authorization shall be performed in compliance with this Authorization and Approved Plan. Authorized Person agrees that a copy of the Authorization and Approved Plan shall be kept at the construction site and provided to its employees, agents and contractors. A person (including Authorized Person, its employees, agents or contractors) who violates or fails to comply with the terms and conditions of this Authorization, Approved Plan or an administrative order may be subject to penalties in accordance with §5-514 and §5-911, Department of the Environment Article, Annotated Code of Maryland (2007 Replacement Volume).
4. **Failure to Comply:** If Authorized Person, its employees, agents or contractors fail to comply with this Authorization or Approved Plan, the Administration may, in its discretion, issue an administrative order requiring Authorized Person, its employees, agents and contractors to cease and desist any activities which violate this Authorization, or the Administration may take any other enforcement action available to it by law, including filing civil or criminal charges.
5. **Suspension or Revocation:** Authorization may be suspended or revoked by the Administration, after notice of opportunity for a hearing, if Authorized Person: (a) submits false or inaccurate information in Permit application or subsequently required submittals; (b) deviates from the Approved Plan, specifications, terms and conditions; (c) violates, or is about to violate terms and conditions of this Authorization; (d) violates, or is about to violate, any regulation promulgated pursuant to Title 5, Department of the Environment Article, Annotated Code of Maryland as amended; (e) fails to allow authorized representatives of the Administration to enter the site of authorized activities at any reasonable time to conduct inspections and evaluations; (f) fails to comply with the requirements of an administrative action or order issued by the Administration; or (g) does not have vested rights under this Authorization and new information, changes in site conditions, or amended regulatory requirements necessitate revocation or suspension.
6. **Other Approvals:** Authorization does not authorize any injury to private property, any invasion of rights, or any infringement of federal, State or local laws or regulations, nor does it obviate the need to obtain required authorizations or approvals from other State, federal or local agencies as required by law.
7. **Site Access:** Authorized Person shall allow authorized representatives of the Administration access to the site of authorized activities during normal business hours to conduct inspections and evaluations necessary to assure compliance with this Authorization. Authorized Person shall provide necessary assistance to effectively and safely conduct such inspections and evaluations.
8. **Inspection Notification:** Authorized Person shall notify the Administration's Compliance Program at least five (5) days before starting authorized activities and five (5) days after completion. For Allegany, Garrett, and Washington counties, Authorized Person shall call 301-689-1480. For Carroll, Frederick, Howard and Montgomery counties, Authorized Person shall call 301-665-2850. For Baltimore City, Anne Arundel, Baltimore, Calvert, Charles, Prince George's and St. Mary's, Authorized Person shall call 410-537-3510. For Caroline, Cecil, Dorchester, Harford, Kent, Queen Anne's, Somerset, Talbot, Wicomico and Worcester, Authorized Person shall call 410-901-4020. If Authorization is for a project that is part of a mining site, please contact the Land Management Administration's Mining Program at 410-537-3557 at least five (5) days before starting authorized activities and five (5) days after completion.
9. **Sediment Control:** Authorized Person shall obtain approval from the Caroline County Soil Conservation District for a grading and sediment control plan specifying soil erosion control measures. The approved grading and sediment control plan shall be included in the Approved Plan, and shall be available at the construction site.

**BEST MANAGEMENT PRACTICES FOR WORKING IN
NONTIDAL WETLANDS, WETLAND BUFFERS,
WATERWAYS, AND 100-YEAR FLOODPLAINS**

- 1) No excess fill, construction material, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 2) Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 3) Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic material, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic material, or any other deleterious substance.
- 4) Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- 5) Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification of the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- 6) Rectify any nontidal wetlands, wetland buffers, waterways, or 100-year floodplain temporarily impacted by any construction.
- 7) All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Setaria italica*), Barley (*Hordeum* sp.), Oats (*Uniola* sp.), and/or Rye (*Secale cereale*). These species will allow for the stabilization of the site while also allowing for the voluntary revegetation of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. **Kentucky 31 fescue shall not be utilized in wetland or buffer areas.** The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- 8) After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- 9) To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream:

Use 1 waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.

- 10) Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- 11) Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

0. Federally Mandated State Authorizations:

N/A Water Quality Certification: Water Quality Certification is granted for this project provided that all work is performed in accordance with the authorized project description and associated conditions.

X Coastal Zone Consistency: This Authorization constitutes official notification that authorized activities are consistent with the Maryland Coastal Zone Management Program, as required by Section 307 of the Federal Coastal Zone Management Act of 1972, as amended. Activities within the following counties are not subject to this requirement: Allegany, Carroll, Frederick, Garrett, Howard, Montgomery, and Washington.

11. **Best Management Practices During Construction:** Authorized Person, its employees, agents and contractors shall conduct authorized activities in a manner consistent with the Best Management Practices specified by the Administration.
12. **Disposal of Excess:** Unless otherwise shown on the Approved Plan, all excess fill, spoil material, debris, and construction material shall be disposed of outside of nontidal wetlands, nontidal wetlands buffers, and the 100-year floodplain, and in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands.
13. **Temporary Staging Areas:** Temporary construction trailers or structures, staging areas and stockpiles shall not be located within nontidal wetlands, nontidal wetlands buffers, or the 100-year floodplain unless specifically included on the Approved Plan.
14. **Temporary Stream Access Crossings:** Temporary stream access crossings shall not be constructed or utilized unless shown on the Approved Plan. If temporary stream access crossings are determined necessary prior to initiation of work or at any time during construction, Authorized Person, its employees, agents or contractors shall submit a written request to the Administration and secure the necessary permits or approvals for such crossings before installation of the crossings. Temporary stream access crossings shall be removed and the disturbance stabilized prior to completion of authorized activity or within one (1) year of installation.
15. **Discharge:** Runoff or accumulated water containing sediment or other suspended materials shall not be discharged into waters of the State unless treated by an approved sediment control device or structure.
16. **Instream Construction Prohibition:**
X No instream construction is to occur under this Authorization;
To protect important aquatic species, motor driven construction equipment shall not be allowed within stream channels unless on authorized ford crossings. Activities within stream channels are prohibited as determined by the classification of the stream (COMAR 26.08.02.08): is a Use waterway; in-stream work may not be conducted from inclusive, of any year.
17. **Instream Blasting:** Authorized Person shall obtain prior written approval from the Administration before blasting or using explosives in the stream channel.
18. **Minimum Disturbance:** Any disturbance of stream banks, channel bottom, wetlands, and wetlands buffer authorized by this Authorization or Approved Plan shall be the minimum necessary to conduct permitted activities. All disturbed areas shall be stabilized vegetatively no later than seven (7) days after construction is completed or in accordance with the approved grading or sediment and erosion control plan.
19. **Restoration of Construction Site:** Authorized Person shall restore the construction site upon completion of authorized activities. Undercutting, meandering or degradation of the stream banks or channel bottom, any deposition of sediment or other materials, and any alteration of wetland vegetation, soils, or hydrology, resulting directly or indirectly from construction or authorized activities, shall be corrected by Authorized Person as directed by the Administration.

U.S. ARMY CORPS OF ENGINEERS AUTHORIZATION

The U.S. Army Corps of Engineers does not regulate the fill of isolated nontidal wetlands, the vegetative conversion of forested wetlands to other wetland types (as long as no earth-moving is involved), the clearing of vegetation along stream banks, disturbance and/or filling of the 100-year floodplain, and/or wetland buffers.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

MAY 30 2012

Operations Division

Town of Denton
c/o Sustainable Science LLC
410 South Second Street
Denton, Maryland 21629

Dear Mr. Collins:

This is in reference to your application for a Department of the Army (DA) permit, NAB-(Town of Denton/Crouse Park) 2011-60133 dated January 31, 2011. Enclosed is an initial proffered permit and an approved jurisdictional determination.

You are requested to indicate your acceptance of the terms and conditions set forth in the enclosed permit by placing your signature and the date on the permit where indicated. Please note that on March 28, 2000, the final rule was established for an administrative appeal process for the Regulatory Program of the Corps of Engineers for approved jurisdictional determinations (JD), permit denials, and declined individual permits. Enclosed you will find a Notification of Administrative Appeal Options and Process (NAO/NAP) fact sheet and Request for Appeal (RFA) form. You may accept or object to this initial proffered permit.

To accept this initial proffered permit and the approved jurisdictional determination associated with this permit, you may sign the permit document and return the signed and dated permit to this office for final authorization. A self-addressed, franked envelope is enclosed for this purpose. Please write your application number, as shown in the first paragraph of this letter, and name on the mailing envelope. Your signature on this permit or undertaking any activity in reliance on a Corps permit authorization means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and the approved JD associated with this permit.

Upon receipt of the signed permit, the permit will be validated with the appropriate District signature and returned to you. Failure to submit a copy of the signed permit and initiating the work before receiving the validated permit from the District, could result in Federal enforcement proceedings. You are also advised that you are responsible for obtaining all other required state and/or local authorizations before starting construction on any of the work approved by this DA permit.

To object to the permit because of certain terms and conditions therein, a letter outlining your objections to this initial proffered permit, including any additional information to clarify your objections, must be received by our District Engineer at the address below by JUL 29 2012 or you will forfeit your right to appeal the permit in the future. The letter must be mailed to the following address:

Commander, Baltimore District
U.S. Army Corps of Engineers
Attn: CENAB-OP-R
P.O. Box 1715
Baltimore, Maryland 21203-1715

Please note that if you decline this initial proffered individual permit, you do not have a valid permit to conduct regulated activities in waters of the United States, and must not begin construction of the work requiring a Corps permit unless and until you receive and accept a valid Corps permit.

If we do not receive the signed permit or a letter indicating your objections to the DA permit by JUL 29 2012, we will assume you are no longer interested in the project and we will withdraw your application. The original application and plans will be returned to you and, if at a later date, you want to pursue the project again, you may resubmit your application.

This letter also contains an approved jurisdictional determination. Those areas indicated as waters of the United States, including jurisdictional wetlands shown within the review area on the enclosed drawings dated September 13, 2011, are regulated by this office pursuant to Section 10 of the River and Harbor Act of 1899 and/or Section 404 of the Clean Water Act. Enclosed is an Approved Jurisdictional Determination form that outlines the basis of our determination of jurisdiction over the review area noted above. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. If you request to appeal this determination, you must submit a completed RFA form to the North Atlantic Division Office at the following address:

Regulatory Appeals Review Officer
North Atlantic Division
U.S. Army Corps of Engineers
Fort Hamilton Military Community
General Lee Avenue, Building 301
Brooklyn, NY 11252-6700

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by JUL 29 2012.

It is not necessary to submit an RFA form to the Division office if you do not object to the determination in this letter.

This approved jurisdictional determination associated with this permit is valid for five years from the date of this letter or until the Corps permit expiration date, whichever is less, unless new information warrants a revision before the expiration date, or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.

Enclosed is a compliance self-certification form. Upon completion of the authorized work and required mitigation, you are required to complete the enclosed compliance certification form and return it to the address indicated thereon.

A copy of this letter is also being forwarded to Maryland Department of the Environment for informational purposes. If you have any questions concerning this matter, please call Mr. Rod Schwarm of this office at 410-820-8550.

Sincerely,



Kathy B. Anderson
Chief, Maryland Section Southern

Enclosures



DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

DEPARTMENT OF THE ARMY PERMIT

Application Name and Permit Number: **CENAB-OP-RMS (Town of Denton/Crouse Park)**
2011-60133

Issuing Office:

U.S. Army Engineer District, Baltimore
Corps of Engineers
P.O. Box 1715
Baltimore, MD 21203

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: To fill approximately 160 square feet of emergent wetlands to create a 6.5-foot wide by 24.6-foot long path to connect to an upland ADA pathway; to remove old fill material from a 556 square foot area and a 3,400 square foot area excavated to the adjacent undisturbed wetland elevation which would be allowed to re-vegetate naturally; to emplace up to 270 linear feet of Biotubes landward of the existing Geotubes and to plant approximately 3,280 square feet of spatter dock marsh within the existing boat basin; to construct 213 linear feet of parallel walkway varying in width from 6 feet to 19 feet wide, to extend no more than 19 feet channelward of the existing bulkhead; and to construct a 20-foot wide by 45-foot wharf, a 20-foot wide by 35-foot long wharf and a 10-foot wide by 35-foot long wharf, all to extend a maximum of 20 feet channelward of the approximate mean high water shoreline. All work is to be completed in accordance with the attached plan(s).

Project Location: In the Choptank River and abutting tidal wetlands at Crouse Park, Denton, Caroline County, Maryland.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on December 31, 2022. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.
7. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

The U.S. Code of Federal Regulations, Title 33, Subpart 64 states that all structures erected in navigable waters require obstruction lights unless the applicant is advised to the contrary by the Coast Guard District Commander. If the structures authorized by this permit are to be built in navigable waters, then you must contact the Commander (oan), Fifth Coast Guard District, 431 Crawford Street, Portsmouth, Virginia, 23704, to ascertain the need for obstruction lights.

Special Conditions:

1. The permittee shall not conduct any in stream work from February 15 through June 15 inclusive of any year to protect anadromous fish.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
- Section 404 of the Clean Water Act (33 U.S.C. 1344).
- Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law or to comply with the appropriate local critical area regulations.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

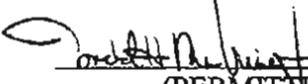
b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

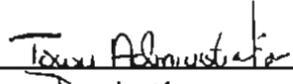
Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

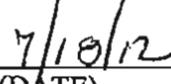
Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



(PERMITTEE)



Town Administrator
Deaton



(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

SUBJECT: CENAB-OP-RMS(Town of Denton/Crouse Park) 2011-60133

Name of Permittee: ~~Glenn Collins~~ Donald Mulrine, Denton Town Manager

Date of Issuance: MAY 30 2012

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US Army Corps of Engineers
Baltimore District
CENAB-OP-R
P.O. Box 1715
Baltimore, Maryland 21203-1715

Please note that your permitted activity is subject to compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Please complete the following information:

1. Date authorized work commenced: _____ 2. Date authorized work completed: _____

3. Was all work and any required mitigation, completed in accordance with your permit authorization, including all general and/or specific conditions? YES ___ NO ___

4. Explain in detail any deviations to the authorized work and/or mitigation (use additional sheets if necessary)

5. Wetland Mitigation: Required? YES ___ NO ___ Required Completion Date _____
Completed? YES ___ NO ___ Mitigation Monitoring Reports Required? YES ___ NO ___

6. Attach labeled photographs showing completed work including mitigation area(s).

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

Signature of Permittee

Date

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): **MAY 30 2012**

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CENABOP-RMS (TOWN OF DENTON/CROUSE PARK) 2011-60133

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: Maryland County/parish/borough: Caroline City: Denton

Center coordinates of site (lat/long in degree decimal format):

Latitude Longitude
38°53'18" -75°50'14"

Name of nearest waterbody: Choptank River

Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: The Choptank River is a TNW.

Name of watershed or Hydrologic Unit Code (HUC): Choptank River Watershed: 02060005

Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.

Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

Office (Desk) Determination. Date: 13 September 2011

Field Determination. Date(s) 11 July 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: The Choptank River is a traditionally navigable waterway and a tributary to the Chesapeake Bay, a navigable waterway with commercial and recreational boat use.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):

- TNWs, including territorial seas
- Wetlands adjacent to TNWs
- Relatively permanent waters¹ (RPWs) that flow directly or indirectly into TNWs
- Non-RPWs that flow directly or indirectly into TNWs
- Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
- Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
 - Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
 - Impoundments of jurisdictional waters
- Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area: The size of the project site area open waters is approximately 5,230 square feet. The project impact area is indicated below.

Non-wetland waters: linear feet: width (ft) and/or 5,230 square feet

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Approximate MHW shoreline/high tide line.

Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):²

¹ For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

² Supporting documentation is presented in Section III.F.

Identify flow route to TNW⁴:
Tributary stream order, if known:

(b) **General Tributary Characteristics (check all that apply):**

Tributary is: Natural
 Artificial (man-made). Explain:
 Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):

Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):

Silts Sands Concrete
 Cobbles Gravel Muck
 Bedrock Vegetation. Type/% cover:
 Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:

Presence of run/riffle/pool complexes. Explain:

Tributary geometry: **Pick List**

Tributary gradient (approximate average slope): %

(c) **Flow:**

Tributary provides for: **Pick List**

Estimate average number of flow events in review area/year: **Pick List**

Describe flow regime:

Other information on duration and volume:

Surface flow is: **Pick List**. Characteristics:

Subsurface flow: **Pick List**. Explain findings:

Dye (or other) test performed:

Tributary has (check all that apply):

Bed and banks
 OHWM⁵ (check all indicators that apply):
 clear, natural line impressed on the bank the presence of litter and debris
 changes in the character of soil destruction of terrestrial vegetation
 shelving the presence of wrack line
 vegetation matted down, bent, or absent sediment sorting
 leaf litter disturbed or washed away scour
 sediment deposition multiple observed or predicted flow events
 water staining abrupt change in plant community
 other (list):
 Discontinuous OHWM.⁶ Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

High Tide Line indicated by: Mean High Water Mark indicated by:
 oil or scum line along shore objects survey to available datum;
 fine shell or debris deposits (foreshore) physical markings;
 physical markings/characteristics vegetation lines/changes in vegetation types.
 tidal gauges
 other (list):

(iii) **Chemical Characteristics:**

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain:

Identify specific pollutants, if known:

⁴ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁵ A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁶ Ibid.

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: The size of the project site area open waters is indicated below.

1.
 - TNWs: linear feet width (ft), 5,230 square feet
 - Wetlands adjacent to TNWs: acres.
2. RPWs that flow directly or indirectly into TNWs.
 - Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
 - Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

Provide estimates for jurisdictional waters in the review area (check all that apply):

- Tributary waters: linear feet width (ft).
 - Other non-wetland waters: acres.
- Identify type(s) of waters:

3. Non-RPWs⁷ that flow directly or indirectly into TNWs.

⁷See Footnote # 3.

**NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND
REQUEST FOR APPEAL (NAO/NAP fact sheet & RFA form)**

Applicant: Town of Denton/Crouse Park		File Number: 2011-60133	Date: MAY 30 2011
Attached is:		See Section below	
<input checked="" type="checkbox"/>	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A	
<input type="checkbox"/>	PROFFERED PERMIT (Standard Permit or Letter of permission)	B	
<input type="checkbox"/>	PERMIT DENIAL	C	
<input checked="" type="checkbox"/>	APPROVED JURISDICTIONAL DETERMINATION	D	
<input type="checkbox"/>	PRELIMINARY JURISDICTIONAL DETERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at <http://usace.army.mil/inet/functions/cw/cecwo/reg> or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the Baltimore District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations (JD) associated with the permit.
- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the Baltimore District Engineer. Your objections must be received by the Baltimore District Engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the Baltimore District Engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the Baltimore District Engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the Baltimore District Engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- **APEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.

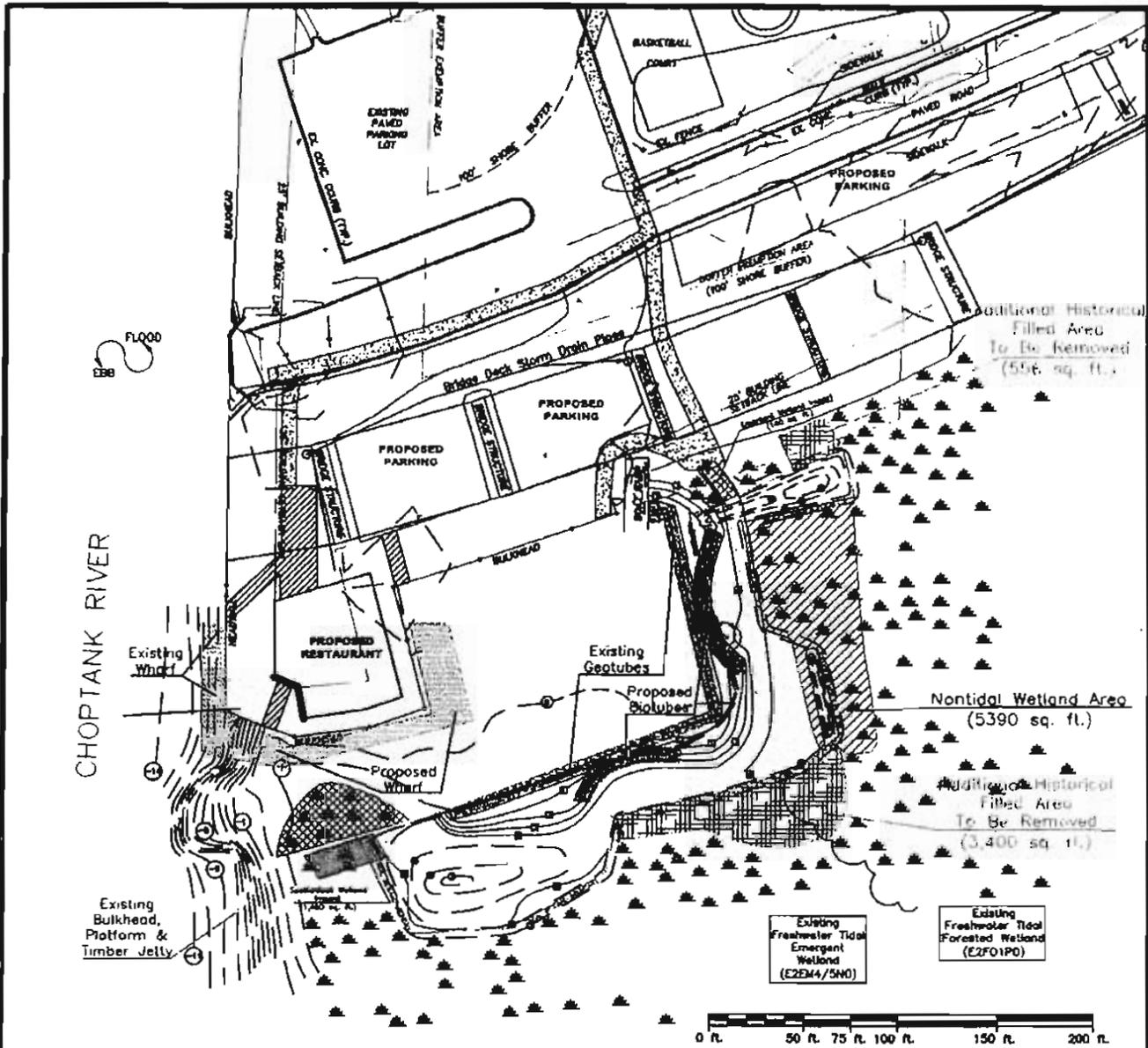
D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- **APEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the North Atlantic Division Engineer, ATTN: CENAD-PD-PSD-O, Fort Hamilton Military Community, Building 301, General Lee Avenue, Brooklyn, NY 11252-6700. This form must be received by the North Atlantic Division Engineer within 60 days of the date of this notice with a copy furnished to the Baltimore District Engineer.



13 September 2011

Crouse Park Redevelopment Plan
 Denton, Maryland
 Sheet 1 of 3



NOTES:

- 1) Base topographic, physical features and tidal wetland boundary obtained from plan entitled SHEET NO. 1 OF 1; TOPOGRAPHIC WORKSHEET; ON THE LANDS OF COMMISSIONERS OF DENTON; THIRD ELECTION; CAROLINE COUNTY, MARYLAND dated April, 2002 by McCrone, Inc. CAD file 01421-T transmitted to Sustainable Science LLC on December 27th, 2004.
- 2) Bathymetry information obtained from plan entitled CROUSE PARK CAROLINE COUNTY HYDRO SURVEY dated 8/21/03 with survey dated 7/22/03 & 8/12/03 by State of Maryland Department of Natural Resources Engineering and Construction Division.
- 3) Additional fill areas, nontidal wetland areas and 1972 Maryland Wetland Map line determined during field review with representatives from Maryland Department of the Environment Tidal and Nontidal Wetland Divisions and State of Maryland Critical Areas on October 28th, 2007.
- 4) Crouse Park design based upon information described in Note 1 & 2.

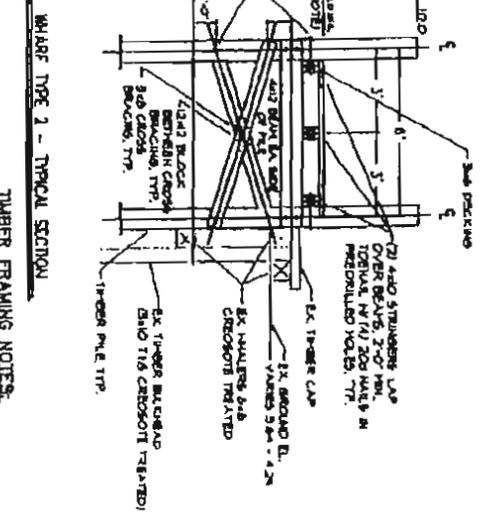
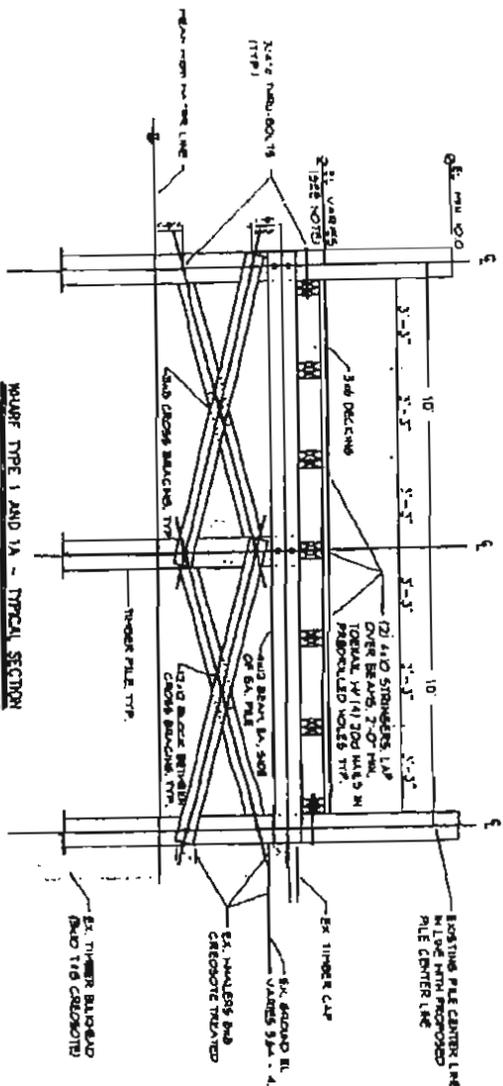
TIDAL PERMIT PLAN

Crouse Park Redevelopment
Shoreline Enhancement Construction
Denton, Maryland

SUSTAINABLE SCIENCE LLC
E. Colquhoun Engineering Services
 4107 S. Seward Street
 Denton, Maryland 21520
 Phone: (410) 224-4316
 www.sustainable-science.com

SCALE:	1 inch = 80 feet
DRAWN BY:	A. McCullough
DATE:	June 7th, 2011
LAST REVISION:	NONE
SS PROJECT NO:	07017

Sheet 2 of 3

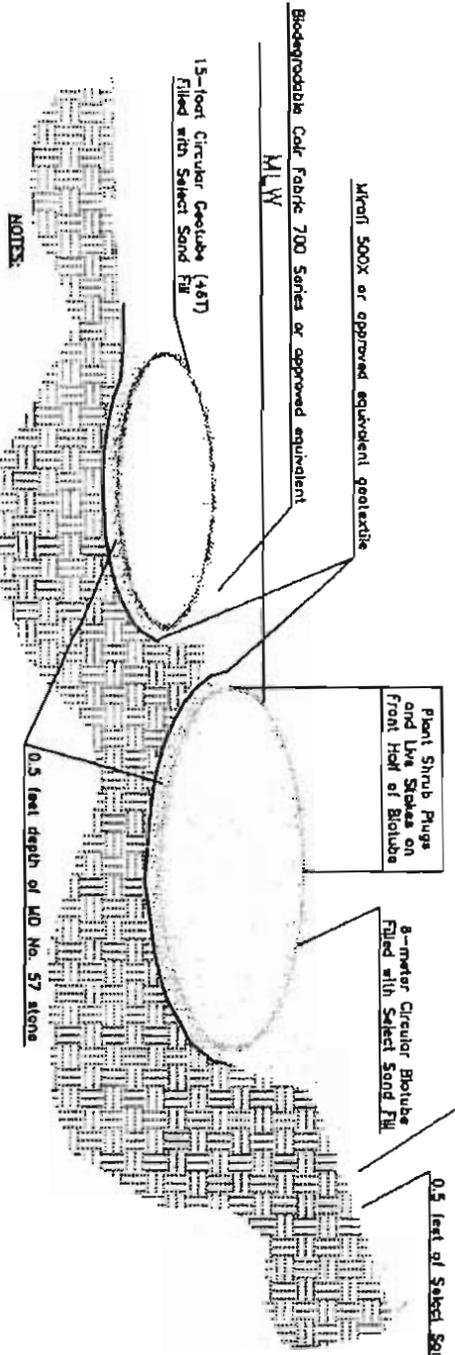


TIMBER FRAMING NOTES:

1. ALL DECK BEAMS, STRINGERS AND DECKING PLANKS TO BE 5.7\"/>

2. ALL HARDWARE TO BE ASTM A307 DIPPED GAL (ASTM - 153) MIN 90% DUAL 3/4\"/>

3. HEAVY DUTY GALV. BEAM BRACKETS (PLANCED); 3 GAUGE MIN. TO BE USED FOR ALL ANCHOR CONNECTIONS, DIAGONAL BRAYS AND/OR PERPENDICULAR CONNECTIONS W/ SHIRT PLATE.
4. COUNTERSINK ALL BOLTS ON OUTBOARD FACE OF PLYM.
5. ALL STANDARDS FOR ERECTING HEAVY TIMBER FRAMING TO BE IN ACCORDANCE WITH AISC TIMBER CONSTRUCTION MANUAL.
6. ALL FIELD CUTS TO BE TREATED W/ 2 COATS OF 20% COPPER NAF TRAVALATE.
7. DECK ELEVATIONS TO BE ESTABLISHED BY DIMENSION, MAY VARY FROM EL. 4.5 TO EL. 5.5 VERTICAL TRANSITION LAYS (1-12) TO MEET HANDICAP REQUIREMENTS.
8. SEE SPECIFICATIONS FOR ADDITIONAL A/E INFORMATION.



- NOTES:**
- 1) Select Sand Fill shall be comprised of clean washed sand with no more than ten (10) percent passing by weight the No. 200 sieve.
 - 2) Slope to be graded to 0.5 feet below grades shown on grading plan with areas to receive geotubes and biotubes C-bed graded.
 - 3) Geotextile shall be placed and No. 57 stone placed prior to placing biotubes and geotubes.
 - 4) Geotube and biotube shall be completely filled with Select Sand Fill in full tubes. Fill tubes shall be tied off after filling operations are complete.

13 September 2011
 Crouse Park Redevelopment Plan
 Denton, Maryland
 Sheet 3 of 3

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

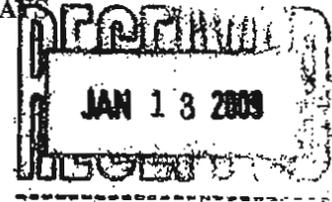
Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

January 9, 2009

William Kastning
Town of Denton
13 North Third Street
Denton, Maryland 21629



RE: Crouse Park Mitigation Plan Approval

Dear Mr. Kastning,

On January 7, 2009, the Critical Area Commission Project Subcommittee approved the Buffer Management Plan (including on and off site mitigation plans) for the Crouse Park project in order to satisfy the following condition of project approval:

Prior to the commencement of construction, the Town of Denton shall submit a revised Buffer Management Plan, including design specifications for off site mitigation, to the Project Subcommittee for review and approval. The Plan shall address and incorporate the recommendations provided by the Critical Area Commission staff.

At this time, please complete and return the attached Planting Agreement Form and approved plans with a copy of the planting list for the 8,233 square feet of on site forested Buffer plantings. The form must be completed and returned within 30 days of the date of this letter. Please note a signature and anticipated planting date must be provided at the bottom of this form. Once this information is received, the Town will have fulfilled the above referenced condition of approval.

Thank you for attending the morning Subcommittee meeting. Please contact Julie Roberts at this office if you have any questions at (410) 260-3476.

Sincerely,

A handwritten signature in black ink, appearing to read "Marshall Johnson".

Marshall Johnson
Natural Resource Planner

Enclosure: Planting Agreement Form and Plans

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

**STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

April 13, 2009

Mr. William Kastning
Director of Planning and Codes
Town of Denton
13 North Third Street
Denton, MD 21629

Re: Crouse Park Mitigation Plan

Dear Mr. Kastning,

Thank you for forwarding the Planting Agreement and mitigation plans for Crouse Park. The submission of this agreement and the plans satisfies the Commission's condition of approval associated with this project.

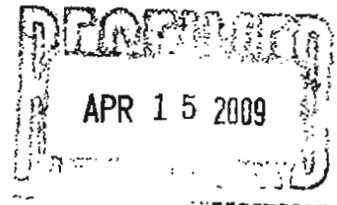
Thank you for forwarding these documents. If you have any questions, please call 410-260-3476.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Roberts".

Julie Roberts
Natural Resources Planner

Cc: DE 210-08



Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair
Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS
1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

February 7, 2013

Mr. Thomas Batchelor
Acting Director
Town of Denton
13 North Third Street
Denton, MD 21629

Re: Crouse Park North

Dear Mr. Batchelor,

It is my understanding that the State Highway Administration (SHA) is seeking a reaffirmation that the proposed project at the northern section of Crouse Park is in alignment with what was originally approved by the Critical Area Commission in 2006 and 2008. As you know, this site has a long history and many of the reviewing parties of the plans for Crouse Park are no longer involved with the project. That being said, it does appear that the current plans for the Visitor Center and other improvements to Crouse Park North were reviewed and approved by the Critical Area Commission in 2006 and that no changes have been made from this original and previously approved plan.

The outstanding issue regarding the proposed Visitor Center is the mitigation required. Due to the site constraints associated with providing mitigation for the entirety of the Park, both the South and North sections, an offsite location was identified to accommodate the remainder of the plantings that could not be located on site. Areas on Sharp Road were used to meet the planting requirement, however, as we have discussed and witnessed through a field visit on April 12, 2012, these plantings failed to thrive due to weather and site conditions. At the site visit with your staff, which included Mr. Mulrine, Al McCullough of Sustainable Science, Critical Area Commission staff, as well as Critical Area Commissioner Nick Carter, we discussed alternative planting options that may better suit the mitigation requirement.

Several items were discussed at that field visit that were felt could improve the total mitigation value and survivability of the plantings. Among them were better preparation of the soil, an improved watering schedule, a different selection of shrubs and trees, an augmentation of the existing riparian area surrounding the stream on site, and potentially a reconfiguration of the proposed ball fields to accommodate the plantings. I have in my notes that Mr. Mulrine would contact the owner of the baseball field (on or around April 16, 2012) to determine if the configuration the future proposed baseball fields could be changed to accommodate the required

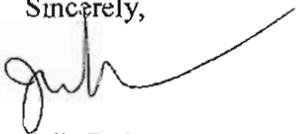
replacement mitigation plantings in this area. I do not believe that we were made aware of the outcome of those conversations.

The purpose of this letter is twofold: (1) to provide confirmation to the SHA that the proposed plan for the Visitor Center appears to be what was approved in 2006 and (2) to request that the Town revisit the mitigation requirement for this project. Mr. Nick Carter provided several suggestions for how to best meet the mitigation requirements on site and Commission staff has also provided guidance regarding better survivability and viability on this site. Additionally, there was concern at that site visit that the trees surrounding the water feature were planned to be removed. It was Commission staffs' position that this area could be augmented, should this be agreeable to the Town and the owners of the field.

Commission staff would be happy to provide additional assistance to the Town regarding these mitigation requirements, so that planting can be conducted in the next planting season, if possible. Please have the appropriate staff member provide an update in regards to a revised mitigation plan for this project.

I can be reached for any questions or comments at 410-260-3476 or at jroberts@dnr.state.md.us.

Sincerely,



Julie Roberts
Natural Resources Planner

Cc: Nick Carter
Donald Mulrine, Town Administrator
Kate Ellis, SHA
Jessica Silwick, SHA
Al McCullough, Sustainable Science, LLC

DE 210-08

Martin O'Malley
Governor
Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair
Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS
1804 West Street, Suite 100, Annapolis, Maryland 21401
(410) 260-3460 Fax: (410) 974-5338
www.dnr.state.md.us/criticalarea/

July 22, 2013

Ms. Adriene Metzbower
OPPE- Environmental Planning Division (EPLD)
Maryland State Highway Administration
707 N. Calvert Street, MS C-301
Baltimore, MD 21202

Re: Crouse Park Visitor Center

Dear Ms. Metzbower,

We understand that State Highway Administration is seeking clarification that the Town of Denton's proposal for Crouse Park Visitors Center is in compliance with State law and Critical Area requirements. In 2006, the project was approved by the Critical Area Commission and a mitigation plan for the 19,200 square feet of disturbance proposed to the Buffer was approved. We have received plans that meet this mitigation requirement. We have also received an updated Planting Agreement (attached) for this project, indicating the future date of planting at the completion of construction. Therefore, all current Critical Area requirements have been met for the Visitors Center to be located at Crouse Park North.

Thank you for your coordination on this project. Should you have any questions regarding the contents of this letter, I can be reached at 410-260-3476 or a jroberts@dnr.state.md.us.

Sincerely,

A handwritten signature in black ink, appearing to read "Julie Roberts", written over a horizontal line.

Julie Roberts
Natural Resources Planner

Enclosure

DE 188-06

Cc: Donald Mulrine, Town Administrator, Denton
Tom Batchelor, Acting Director, Denton

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION
AUTHORIZATION TO PROCEED

AUTHORIZATION NUMBER: 201260851/12-NT-2041

EFFECTIVE DATE: December 13, 2012

EXPIRATION DATE: December 13, 2015

AUTHORIZED PERSON: Town of Denton
13 North 3RD Street
Denton, Maryland 21629
Attention: Donald Mulrine



IN ACCORDANCE WITH ENVIRONMENT ARTICLE §5-503(a) AND §5-906(b), ANNOTATED CODE OF MARYLAND (2007 REPLACEMENT VOLUME), COMAR 26.17.04 AND 26.23.01, AND 26.08.02 AND THE ATTACHED CONDITIONS OF AUTHORIZATIONS, Town of Denton ("AUTHORIZED PERSON"), IS HEREBY AUTHORIZED BY THE WATER MANAGEMENT ADMINISTRATION ("ADMINISTRATION") TO CONDUCT A REGULATED ACTIVITY IN A NONTIDAL WETLAND, BUFFER, OR EXPANDED BUFFER, AND/OR TO CHANGE THE COURSE, CURRENT OR CROSS-SECTION OF WATERS OF THE STATE, IN ACCORDANCE WITH THE ATTACHED PLANS APPROVED BY THE ADMINISTRATION ON December 13, 2012 ("APPROVED PLAN") AND PREPARED BY Kercher Engineering, Inc. AND INCORPORATED HEREIN, AS DESCRIBED BELOW:

The proposed work includes construction of a Heritage and Welcome Center. The proposed work will permanently impact 44715 sq-ft or 914 cu-yds in the 100-year floodplain and temporarily impact 19800 sq-ft in the 100-year floodplain. The project is located at the northeast corner of MD Route 404 and the Choptank River, Denton, Maryland, 221629 in Caroline County.

MD Grid Coordinates: N136266/E500883

William Seiger
Division Chief
Waterway Construction Division

RECEIVED
JAN 08 2013
T.O.D.

Attachments: Conditions of Authorization
Best Management Practices
8 ½ x 11 Plan Views

cc: WMA Compliance Division Caroline County w/ file
Alan Kampmeyer, MDE Nontidal Wetlands Division

WHARVES at CHOPTANK CROSSING

SITE IMPROVEMENT PLAN TOWN of DENTON CAROLINE COUNTY – MARYLAND

FAP No. **STP-3(434)E**
SHA CONTRACT No. **CO4125125**

AASHTO DESIGN CRITERIA
THIS PROJECT WAS DESIGNED IN ACCORDANCE WITH THE 2001 PUBLICATION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."

STANDARD SPECIFICATIONS BOOK, BOOK OF STANDARDS AND MUTCD

ALL WORK ON THIS PROJECT SHALL CONFORM TO: THE MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATIONS SPECIFICATIONS ENTITLED STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008 REVISIONS THEREOF OR ADDITIONS THERETO; THE SPECIAL PROVISIONS INCLUDED IN THE INVITATION FOR BIDS BOOK; THE ADMINISTRATIONS BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES; THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), ADOPTED; AND TOWN OF DENTON SPECIFICATIONS AND DETAILS, CONTAINED HEREIN.

RIGHT OF WAY

RIGHT OF WAY AND EASEMENT LINES SHOWN ON THESE PLANS ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT OFFICIAL. FOR OFFICIAL FEE RIGHT OF WAY AND EASEMENT INFORMATION, SEE APPROPRIATE RIGHT OF WAY PLATS.

UTILITIES

THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE OF THE ACCURACY OF SAID LOCATIONS.

ENVIRONMENTAL INFORMATION

ALL STORMWATER MANAGEMENT FACILITIES CONSTRUCTED FOR CONTRACT NO. _____ SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE STATE HIGHWAY ADMINISTRATIONS BEST MANAGEMENT PRACTICES (BMP) INSPECTION AND REMEDIATION PROGRAM.

SEDIMENT AND EROSION CONTROL REGULATIONS WILL BE STRICTLY ENFORCED DURING CONSTRUCTION.

OWNERS/DEVELOPERS CERTIFICATION :

I, _____ WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I HEREBY AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY STATE OF MARYLAND, DEPARTMENT OF THE ENVIRONMENT, COMPLIANCE INSPECTORS.

COMPLETENESS OF DOCUMENTS

THE TOWN OF DENTON SHALL ONLY BE RESPONSIBLE FOR THE COMPLETENESS OF DOCUMENTS OBTAINED DIRECTLY FROM THE TOWN OF DENTON'S CASHIER'S OFFICE. FAILURE TO ATTACH ADDENDA MAY CAUSE THE BID TO BE IRREGULAR.

STANDARD STABILIZATION NOTE:

FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDER DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND FOURTEEN (14) DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

THESE PLANS HAVE BEEN REVIEWED BY THE TOWN OF DENTON AND ALL COMPONENTS SHOWN HEREIN COMPLY WITH ALL TOWN CODE STANDARDS AND SPECIFICATIONS.

APPROVED: _____ DATE _____
PLANNING COMMISSION CHAIRPERSON

APPROVED: _____ DATE _____
DIRECTOR OF PLANNING AND CODES

APPROVED: _____ DATE _____
DIRECTOR OF PUBLIC WORKS

REVIEWED FOR CAROLINE SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

APPROVED: _____ DATE _____
CAROLINE SOIL CONSERVATION DISTRICT

NOTE: THE CAROLINE SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY, OR OTHERWISE ALTER THE SOIL EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

OWNERS CERTIFICATION

SIGNATURE _____ DATE _____

1) ANY CLEARING, GRADING CONSTRUCTION OR DEVELOPMENT, OR ALL OF THESE, WILL BE DONE PURSUANT TO THIS PLAN. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGES MADE ON THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR THE SUBCONTRACTOR.
2) ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATION OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING FOR THE CONTROL OF EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT.

EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.

Project Sheet Index

SHEET No.:	SHEET DESCRIPTION:
C1	COVER/INDEX SHEET
C2	GENERAL NOTES & LEGEND
E1	EXISTING CONDITIONS & DEMOLITION PLAN
R1	SITE PLAN
G1	EROSION & SEDIMENT CONTROL and GRADING PLAN
U1	UTILITY PLAN
D1	EROSION & SEDIMENT CONTROL and GRADING DETAILS
D2	CONSTRUCTION DETAILS
D3	UTILITY DETAILS
L1	LANDSCAPING and LIGHTING PLAN
L2	WATER QUALITY POND PLANTING PLAN

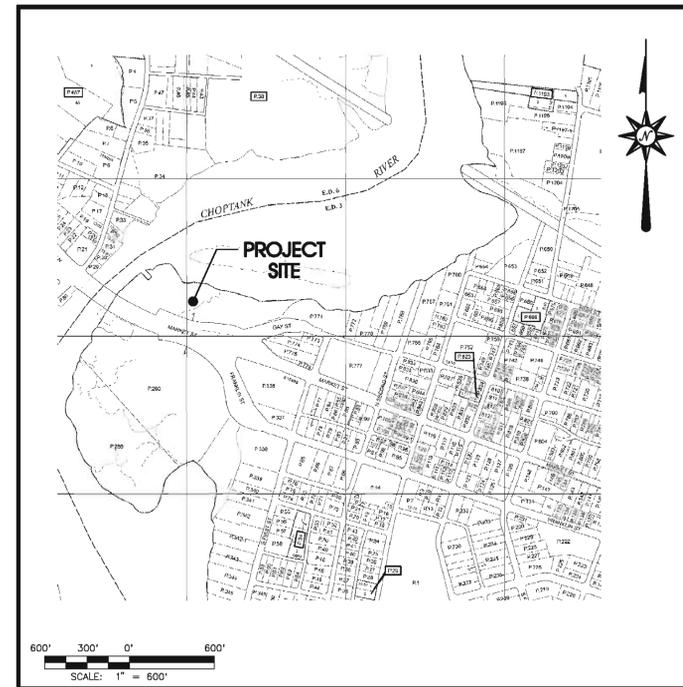
FOR ARCHITECTURAL DETAILS AND SPECIFICATIONS REFER TO SEPARATE PLANS AS PREPARED BY CHOPTANK DESIGN.

PROJECT INFORMATION

SITE AREA	Parcel A - 2.54 ACRES +/- Parcel B - 0.23 ACRES +/-
PROPOSED PARKING	12
PROPERTY OWNER	TOWN OF DENTON
TAX MAP	103
PARCEL	280
ZONING	CC - CENTRAL COMMERCIAL SR - SUBURBAN RESIDENTIAL

PERMIT APPROVALS REQUIRED

SITE PLAN	TOWN OF DENTON - PLANNING COMMISSION, PUBLIC WORKS DEPARTMENT, TOWN ENGINEER,
EROSION AND SEDIMENT CONTROL PLAN APPROVAL	CAROLINE COUNTY HEALTH DEPARTMENT
STORMWATER MANAGEMENT	CAROLINE COUNTY SOIL CONSERVATION DISTRICT
STORMWATER NPDES - NOI	DENTON TOWN ENGINEER MDE



Site Vicinity Map

Prepared For:

DENTON DEVELOPMENT CORPORATION

406 MARKET STREET
DENTON, MD 21629
Phone: 410.479.4305
Fax: 410.479.4309

Prepared By:

KERCHEER ENGINEERING, INC.
ENGINEERS • PLANNERS • SURVEYORS

413 East Market Street
Georgetown, Delaware 19947

254 Chapman Road, Suite 202
Newark, Delaware 19702

DESIGN ENGINEER CERTIFICATE	PROFESSIONAL SEAL
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE LAWS OF THE STATE OF MARYLAND.	
KERCHEER ENGINEERING, INC. 413 E. MARKET STREET GEORGETOWN, DE 19947 (302) 854-9062	
DATE _____	

REVIEWED AND APPROVAL RECOMMENDED	DATE
_____	_____
CHIEF, BRIDGE DESIGN DIVISION	
APPROVAL RECOMMENDED	DATE
_____	_____
DIRECTOR, OFFICE OF STRUCTURES	
APPROVED	DATE
_____	_____
DEPUTY ADMINISTRATOR / CHIEF ENGINEER FOR PLANNING, ENGINEERING, REAL ESTATE AND ENVIRONMENT	

Scale: AS NOTED	SHEET No.:
Date: Mar. 26, 2012	
Last Rev: Jan. 8, 2016	
Job No: 12-0202M	
File No: 12-0202M.pro	C1

LEGEND - SYMBOLS

- GENERAL**
- EXISTING UTILITY POLE
 - PROPOSED UTILITY POLE
 - EXISTING SIGN
 - PROPOSED SIGN
 - EXISTING CONIFEROUS TREE
 - EXISTING DECIDUOUS TREE
 - EXISTING TREE TO BE REMOVED
 - IRON PIPE FOUND
 - CONCRETE MONUMENT FOUND
 - IRON REBAR FOUND
 - DISTURBED IRON PIPE FOUND
 - IRON PIPE TO BE SET
 - FIELDSTONE FOUND
 - EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT
- UTILITY**
- EXISTING JUNCTION BOX/MANHOLE
 - PROPOSED JUNCTION BOX/MANHOLE
 - EXISTING CATCH BASIN
 - PROPOSED CATCH BASIN
- GRADING**
- PROPOSED SPOT GRADE
 - EXISTING SPOT GRADE
- EROSION/SEDIMENT**
- STABILIZED CONSTRUCTION ENTRANCE
 - PIPE OUTLET SEDIMENT TRAP
 - STONE OUTLET SEDIMENT TRAP
 - RIPRAP OUTLET SEDIMENT TRAP
 - TEMPORARY SEDIMENT BASIN
 - INLET PROTECTION - TYPE 1
 - INLET PROTECTION - TYPE 2
 - CULVERT INLET PROTECTION
 - STONE OUTLET SEDIMENT TRAP
 - GEOTEXTILE DEWATERING BAG
 - SKIMMER DEWATERING DEVICE
 - PIPE DEWATERING DEVICE
 - STONE CHECK DAM
 - ROCK OUTLET PROTECTION - 1
 - ROCK OUTLET PROTECTION - 2
 - RIPRAP STILLING BASIN
 - SLOPE TREATMENT - BENCHING
 - SLOPE TREATMENT - GROOVING
 - SLOPE TREATMENT - SERRATING

LEGEND - LINETYPES

- GENERAL**
- EXISTING PROPERTY BOUNDARY
 - EXISTING EDGE OF PAVEMENT
 - EXISTING CENTERLINE OF ROAD
 - EXISTING FENCE
 - EXISTING TREE LINE
 - EXISTING WETLANDS LIMITS
 - EXISTING BUILDING
 - BUILDING RESTRICTION LINE
 - PROPOSED EDGE OF PAVEMENT
 - PROPOSED BUILDING
 - PROPOSED CENTERLINE OF ROAD
 - NON-TIDAL WETLAND BUFFER
 - PROPOSED CLEARING
 - EXISTING SOIL SERIES LIMITS
 - EXISTING SHORE BUFFER
 - PROPOSED STRIPING (PARKING STALLS)
 - PROPOSED CROSSWALK/PATHWAY EXTENTS
 - EXISTING SIDEWALK TO BE REMOVED
 - PROPOSED SIDEWALK
- UTILITY**
- EXISTING WATER MAIN / SERVICE
 - PROPOSED WATER LINE
 - EXISTING SANITARY SEWER PIPING
 - PROPOSED SANITARY SEWER PIPING
 - EXISTING GAS MAIN
 - PROPOSED GAS MAIN
 - EXISTING OVERHEAD UTILITY WIRES
 - EXISTING UNDERGROUND TELEPHONE
 - EXISTING STORMWATER PIPING
 - PROPOSED STORMWATER PIPING
- GRADING**
- SUPPLEMENTAL CONTOUR (1' INTERVAL)
 - INDEX CONTOUR (5' INTERVAL)
 - PROPOSED CONTOUR (1' INTERVAL)
 - PROPOSED CONTOUR (INCREMENTAL)
- EROSION/SEDIMENT**
- LIMITS OF DISTURBANCE
 - SILT FENCE
 - REINFORCED SILT FENCE
 - SUPER SILT FENCE
 - STRAW BALE BARRIER
 - TREE PROTECTION
 - TEMP SEDIMENT BASIN GRADING

GENERAL NOTES

1. THIS PLAN DOES NOT VERIFY THE LOCATION AND/OR EXISTENCE OF EASEMENTS OR RIGHT-OF-WAYS CROSSING SUBJECT PROPERTY AS NO TITLE SEARCH WAS PROVIDED.
2. THE CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS AND APPROVALS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF ANY SITE CONSTRUCTION ACTIVITIES.
3. ALL CONTRACTORS WORKING ON THIS PROJECT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION ACTIVITIES RELATED TO THIS PROJECT ARE PERFORMED IN ACCORDANCE WITH ALL O.S.H.A. (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION) STANDARDS AND REQUIREMENTS.
4. ALL WORK SHALL COMPLY WITH ALL PROVISIONS OF THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
5. CONSTRUCTION MATERIALS AND PROCEDURES SHALL FOLLOW MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS DATED JULY 2008, REVISIONS THEREOF, OR ADDITIONS THERETO, AND THE SPECIAL PROVISIONS INCLUDED IN THIS INVITATION FOR BIDS (IFB) AND THE TOWN OF DENTON DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS AND DETAILS, CONTAINED HEREIN.
6. EXISTING SUBSURFACE UTILITY INFORMATION INDICATED IS BASED UPON VISUAL FIELD INSPECTION BY LAKE ENGINEERING AND INFORMATION PROVIDED BY THE TOWN OF DENTON DEPARTMENT OF PUBLIC WORKS. SUCH INFORMATION CONCERNING THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF SUBSURFACE UTILITIES IS APPROXIMATE IN NATURE AND HAS BEEN OBTAINED AS AN AID IN THE PROJECT DESIGN. THE INFORMATION PROVIDED IS REPRESENTATIVE OF SUBSURFACE CONDITIONS ONLY AT LOCATIONS AND DEPTHS WHERE SUCH INFORMATION WAS OBTAINED. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT UTILITY SIZE, LOCATION, DEPTH, QUANTITY, ETC. AS SHOWN EXISTS BETWEEN EXPLORED LOCATIONS. ACCORDINGLY, UTILITY INFORMATION SHOWN SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. IT IS INCUMBENT UPON THE CONTRACTOR TO VERIFY THE SIZE, LOCATION, DEPTH, QUANTITY, ETC. OF ALL UTILITIES BEFORE EXCAVATION.
7. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY DEVIATION FROM THESE PLANS.
8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING, TWO WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE ALL CONSTRUCTION PHASES WITH THEM:
 - MARYLAND DEPARTMENT OF THE ENVIRONMENT (410) 801-4020
 - CAROLINE COUNTY SOIL CONSERVATION DISTRICT (410) 479-2182
 - TOWN OF DENTON DEPARTMENT OF PUBLIC WORKS (410) 478-5446
 - MISS UTILITY (800) 441-8555
 - KERCHER ENGINEERING, INC. (302) 854-9062
9. THE MEASURES AS SHOWN ON THE APPROVED SEDIMENT CONTROL PLAN SHALL BE COMPLETE AND IN SERVICE PRIOR TO CONSTRUCTION.
10. ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROMOTE POSITIVE DRAINAGE, TOPDRESSED, SEEDED AND MULCHED. IF SETTLEMENT OCCURS, STABILIZATION METHODS SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES (SEE SOIL EROSION AND SEDIMENT CONTROL NOTES, DETAILS AND SPECIFICATIONS).
11. PRIOR TO SEEDING, THE CONTRACTOR SHALL HAVE SOILS TEST TO DETERMINE LIME AND FERTILIZER REQUIREMENTS.
12. ALL DRAINAGE STRUCTURES AND TRENCHES SHALL REMAIN FUNCTIONAL DURING CONSTRUCTION.
13. PIPE AND/OR UTILITY TRENCH BACKFILL, BASE MATERIAL FOR PARKING AREAS AND CURBS SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY AS DENSITY DETERMINED BY ASTM D-1557.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF TRAFFIC ON EXISTING ROADS AND IN THE VICINITY OF THE WORK ZONE FOR THE DURATION OF THE PROJECT.
15. TRENCHES SHALL NOT REMAIN OPEN OVERNIGHT. IF IT IS NECESSARY FOR TRENCHES TO REMAIN OPEN OVERNIGHT THEN THE CONTRACTOR SHALL FOLLOW MARYLAND SHA STANDARDS AND PROCEDURES TO SECURE OPEN TRENCH AREAS.
16. THE CONTRACTOR SHALL CONTINUOUSLY MAINTAIN ALL ROADS SUCH THAT SURFACES ARE KEPT FREE OF SEDIMENT AND CONSTRUCTION DEBRIS. ROADS SHALL BE SWEEPED CLEAN DAILY AND WATER SHALL BE USED TO PREVENT SWEEP SEDIMENTS FROM BECOMING AIRBORNE.
17. THE CONTRACTOR SHALL REPAIR ANY PART OF THE PUBLIC ROADWAY DAMAGED FROM CONSTRUCTION ACTIVITIES. THE ROADWAY SHALL BE REPAIRED AS SOON AS POSSIBLE BUT NO LATER THAN TWENTY-FOUR (24) HOURS AFTER OCCURRENCE.
18. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURES, COMPONENTS, PIPES AND MATERIALS TO THE ENGINEER FOR REVIEW AND APPROVAL.
19. CONTRACTOR SHALL COORDINATE CONNECTION OF REQUIRED UTILITIES AND OBTAIN REQUIRED INSPECTIONS FROM THE TOWN.

NO.	DATE	DESCRIPTION
1	07/17/14	REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14
2	08/14/14	REVISIONS PER SHA WRITTEN COMMENTS DATED 08/14/14
3	09/27/12	REVISIONS PER SHA WRITTEN COMMENTS DATED 09/27/12

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE LAWS OF THE STATE OF MARYLAND.

DESIGN PROFESSIONAL DATE

APPROVED BY: ASJC
 DESIGNED BY: JDPH
 DRAWN BY: JDPH
 LAYER USE: B-001A

ONE INCH = 100 FEET
 THIS PLAN IS THE PROPERTY OF KERCHER ENGINEERING, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF KERCHER ENGINEERING, INC. © COPYRIGHT 2014, KERCHER ENGINEERING, INC. ALL RIGHTS RESERVED.

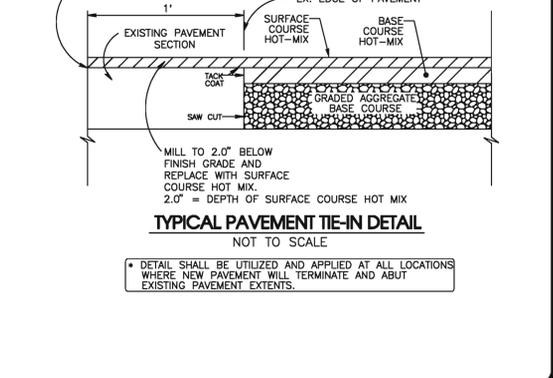
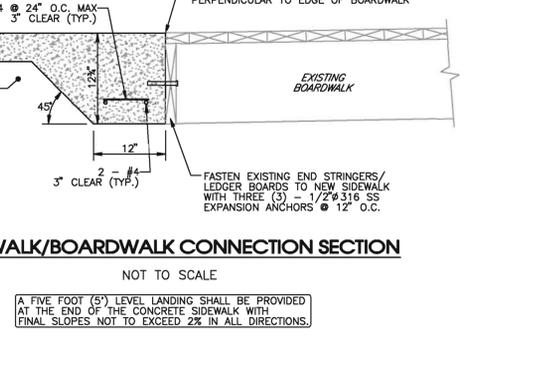
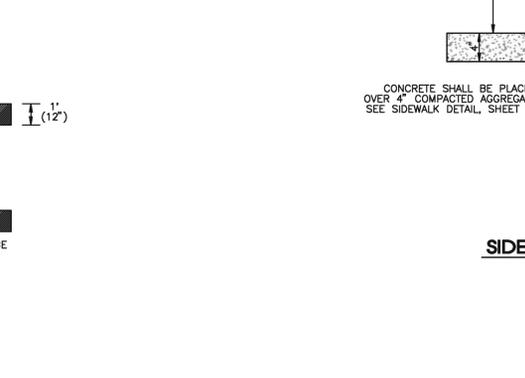
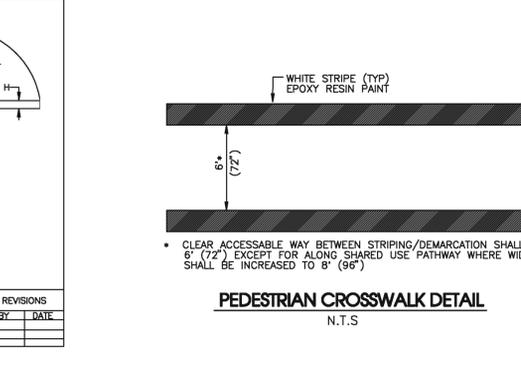
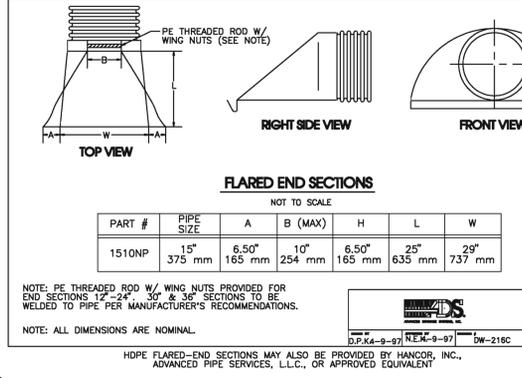
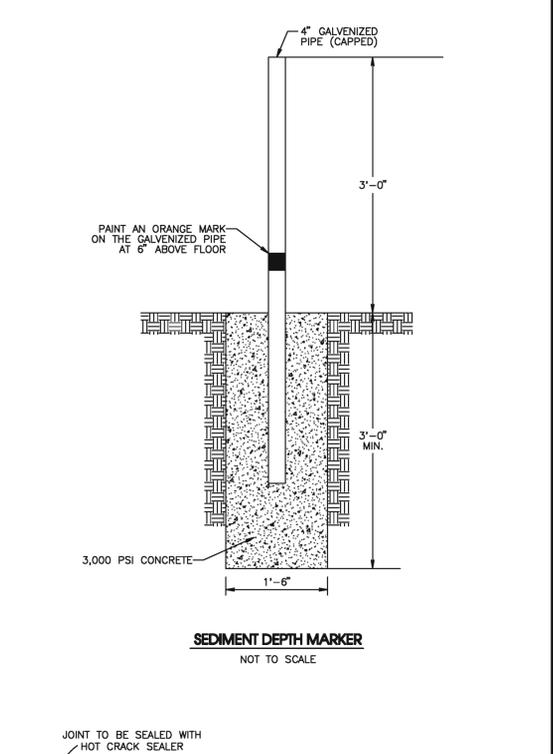
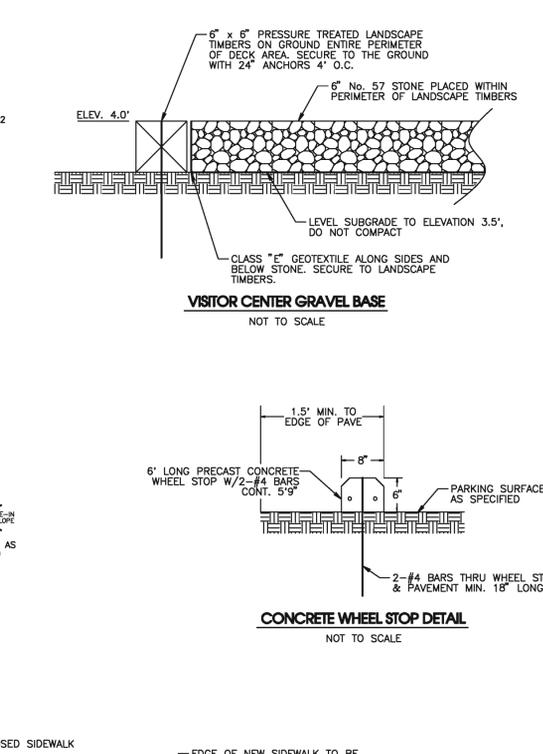
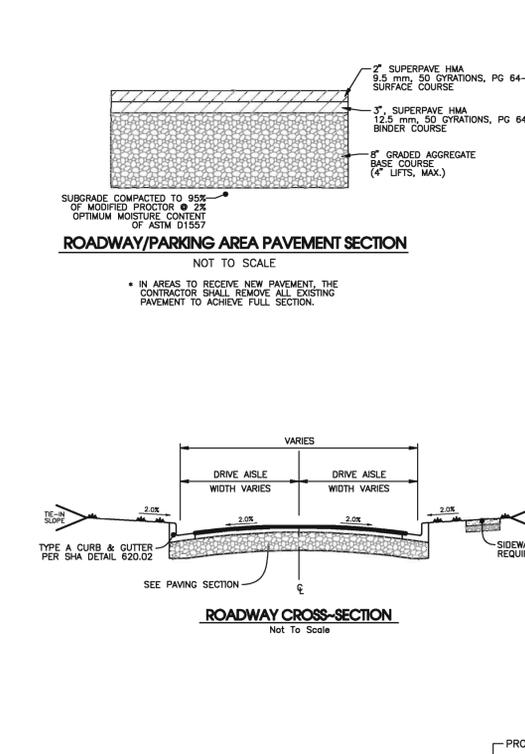
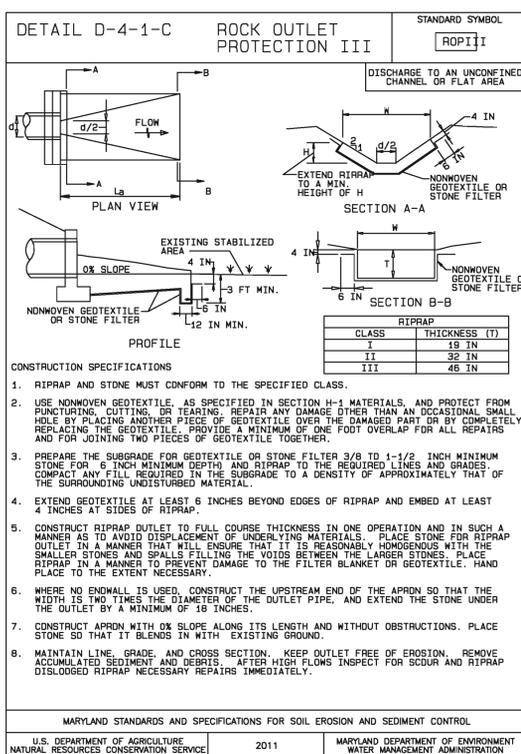
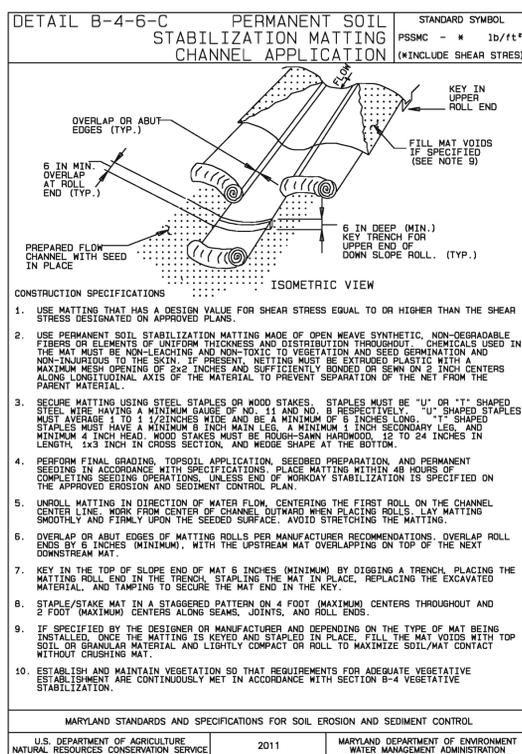
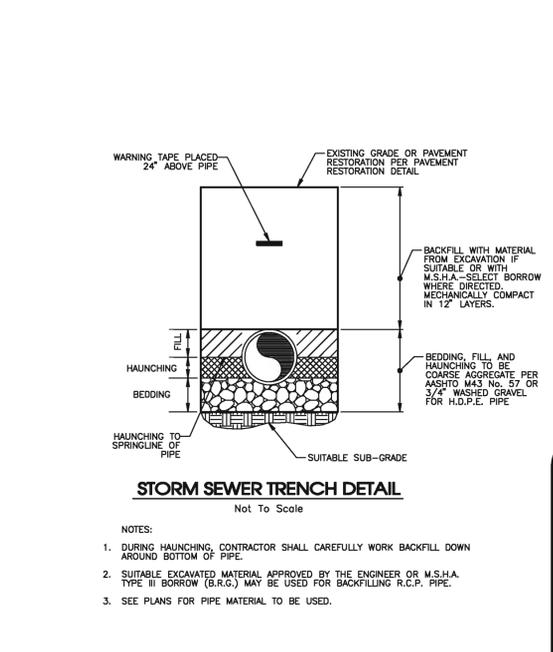
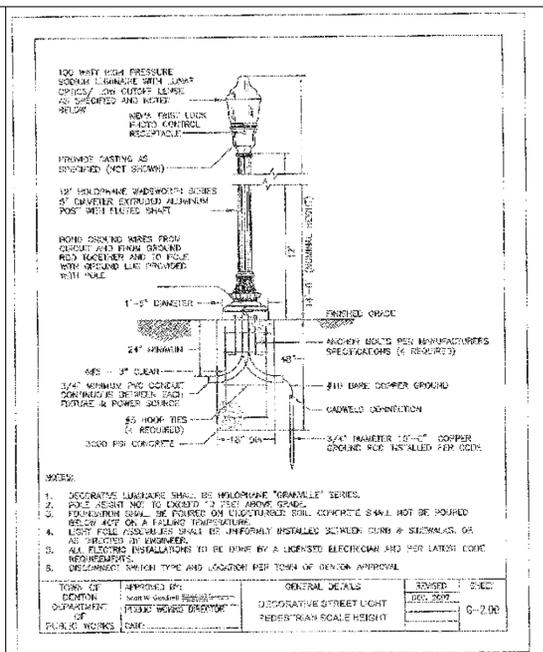
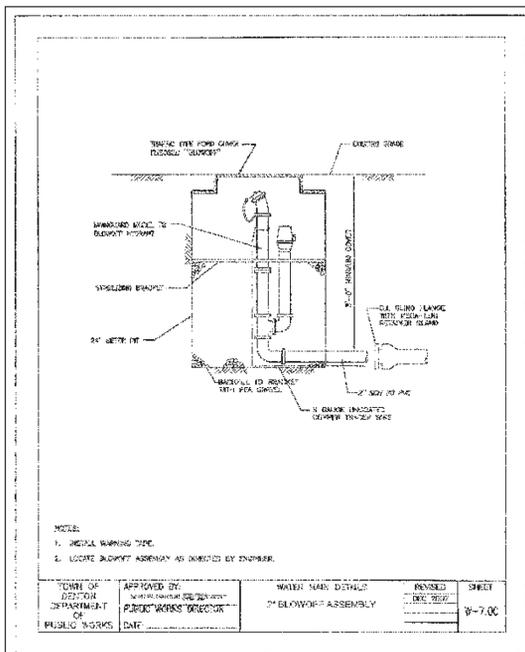
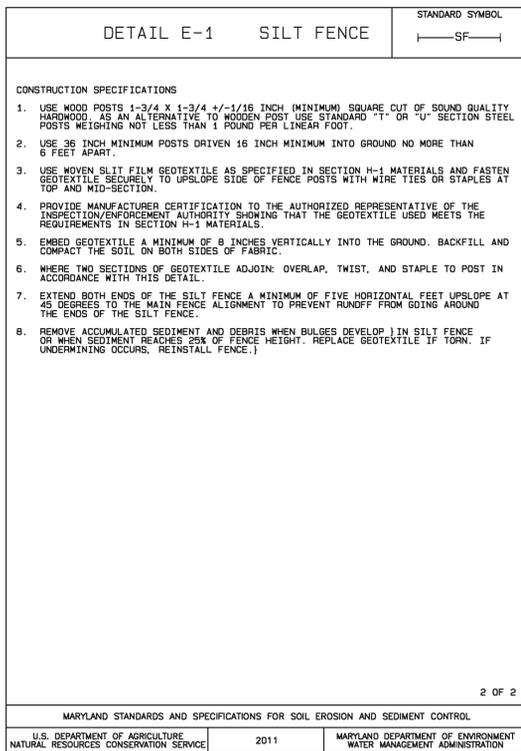
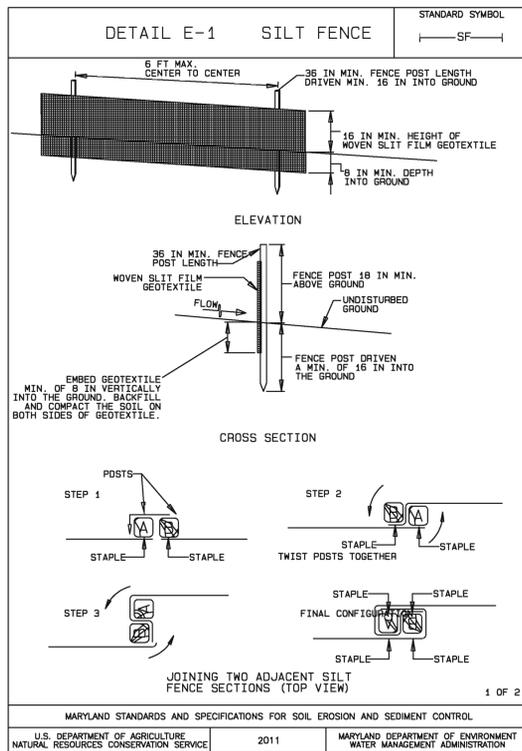
OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
 200 N. W. 31ST ST.
 DENTON, MD 21038
 Phone: 410-479-4326

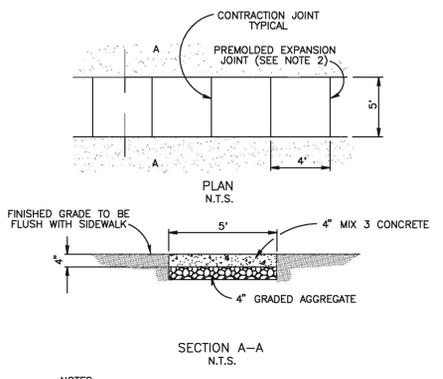
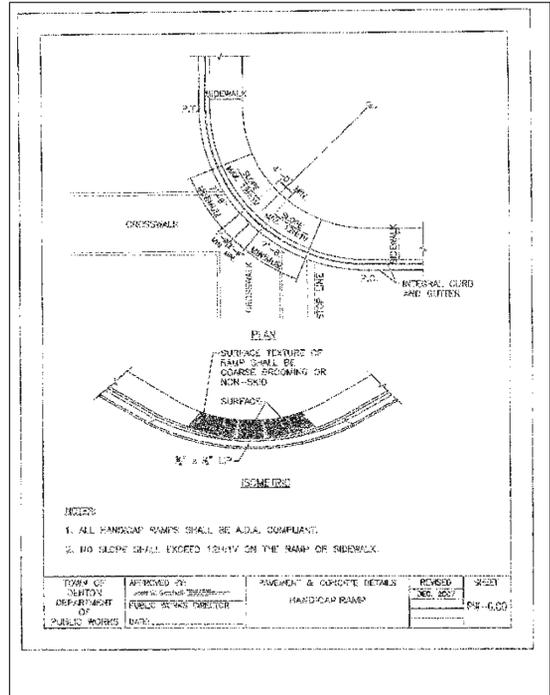
PARCEL INFORMATION:
 TAX MAP 103 / GRID 13 / PARCEL 280
 GROSS AREA: 2.77 Acres
 NET AREA: XXX.XX Acres

GENERAL NOTES & LEGEND
 WHARVES at CHOPTANK CROSSING
 TOWN OF DENTON - CAROLINE COUNTY - MARYLAND

KERCHER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 415 WEST MARKET STREET, SUITE 100, DENTON, MARYLAND 21042
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kercherinc.com

JOB No: 12-0202M
 PLAN DATE: Mar. 26, 2012
 SHEET No.: C2



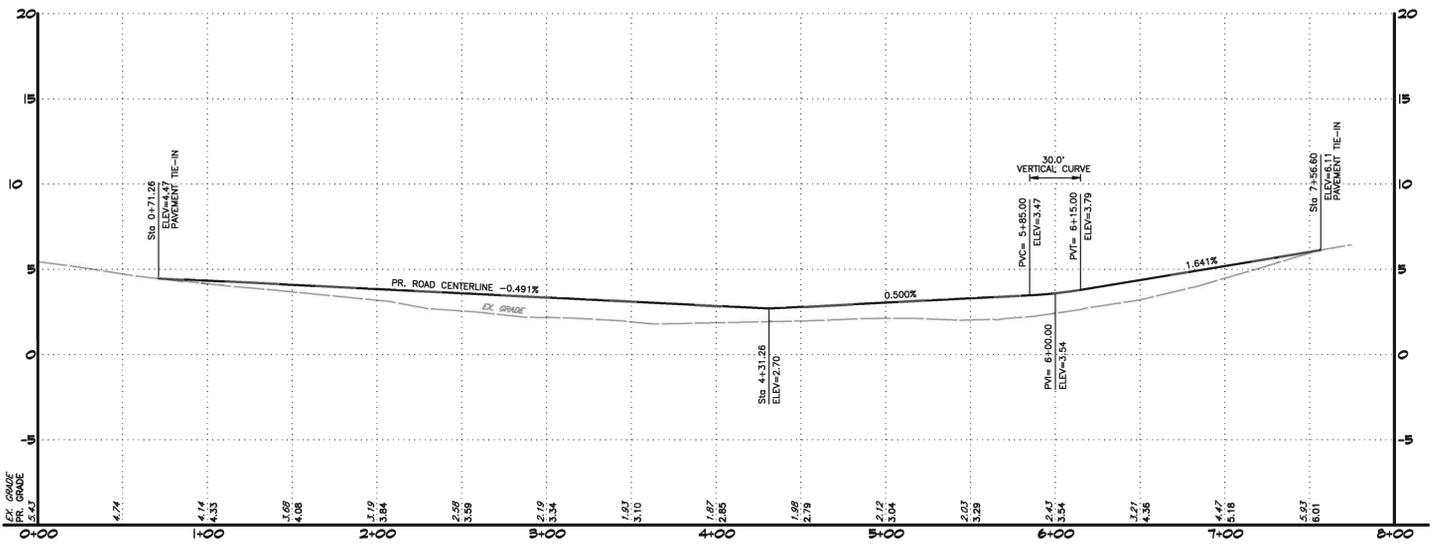


NOTES:

MAXIMUM CROSS SLOPE SHALL BE 2.0%, WITHOUT EXCEPTION.

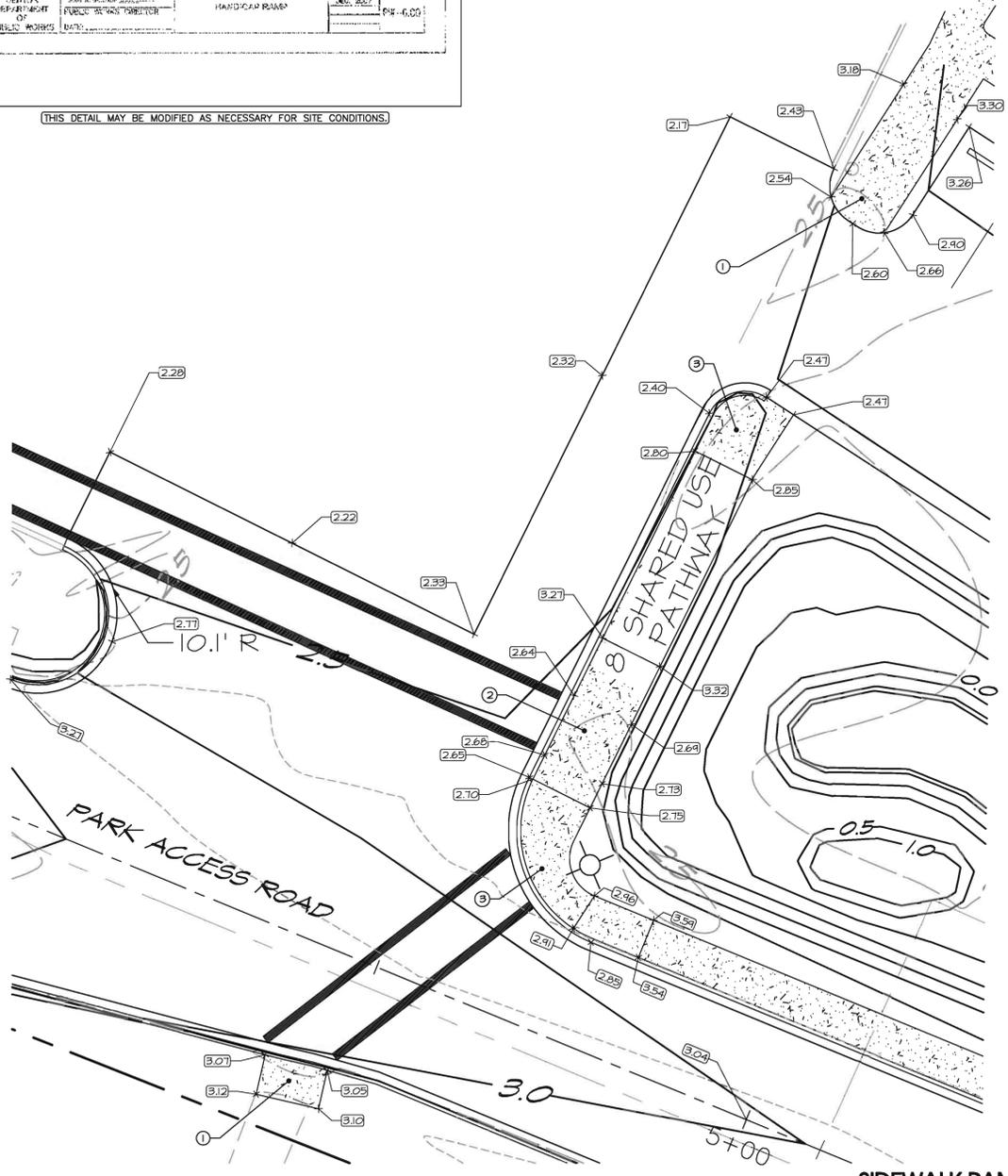
PROVIDE 1/4" PREMOULDED EXPANSION JOINTS AT 20' INTERVALS UNLESS OTHERWISE DIRECTED.

SIDEWALK DETAIL
N.T.S.

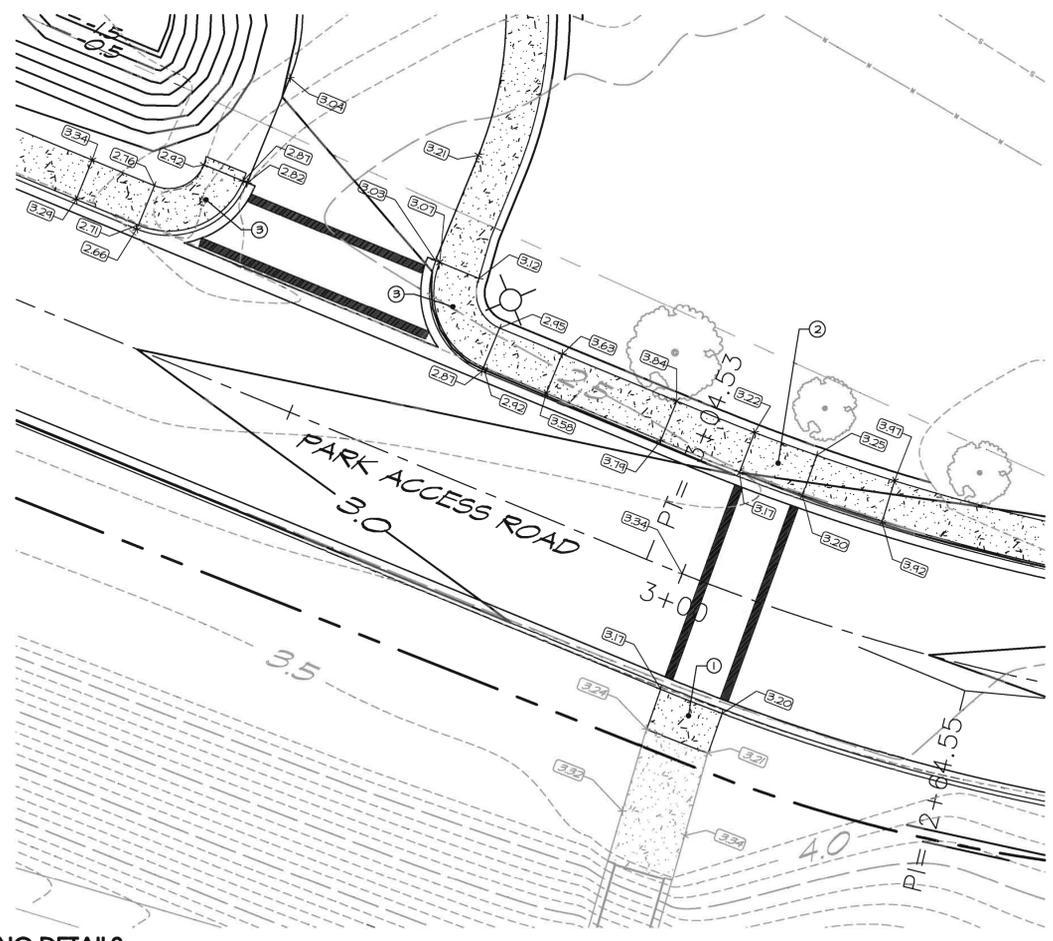


PARK ACCESS ROAD - PROFILE VIEW
SCALE: 1"=50' H, 1"=5' V

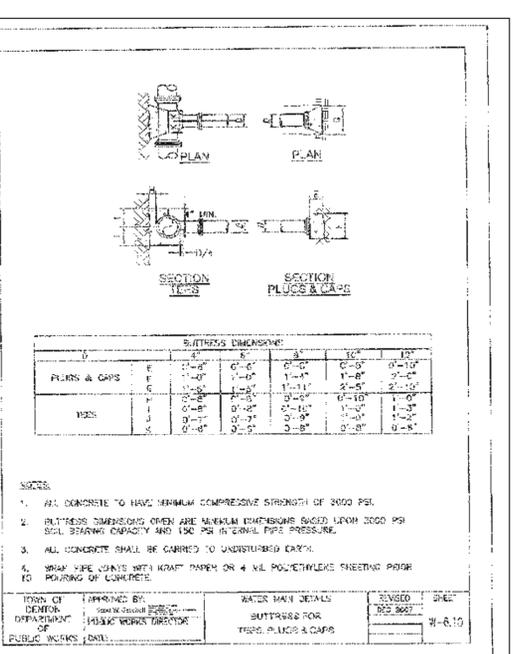
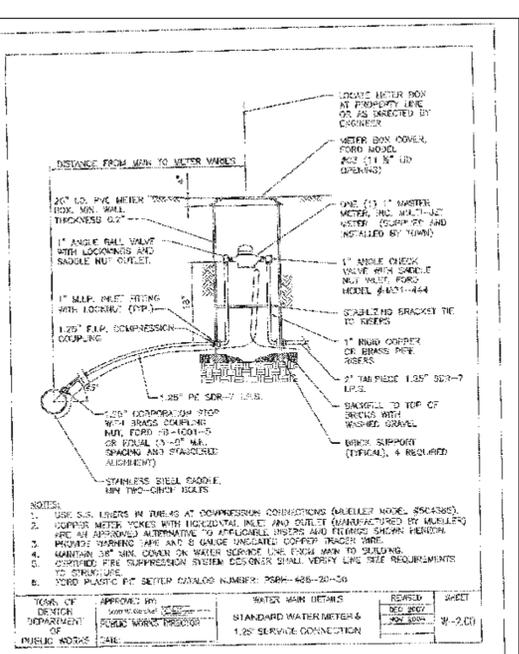
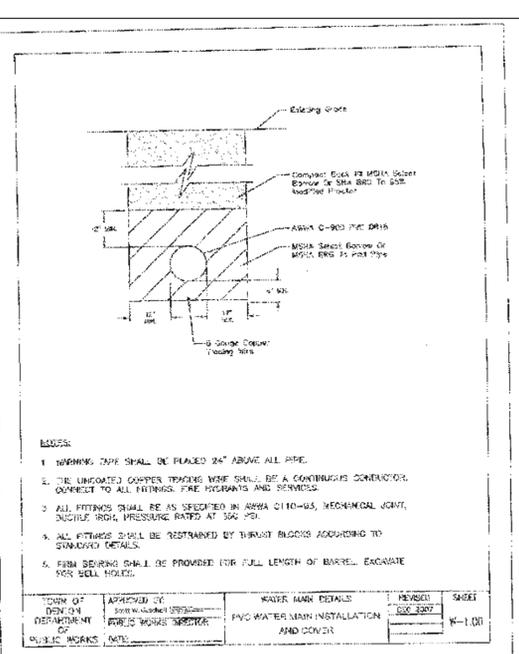
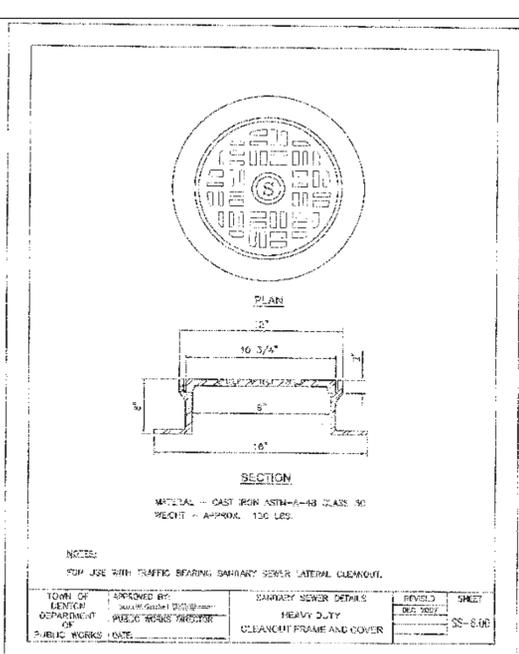
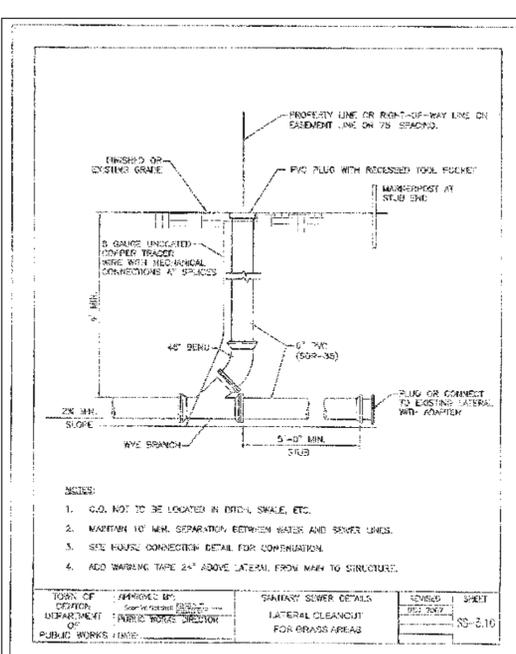
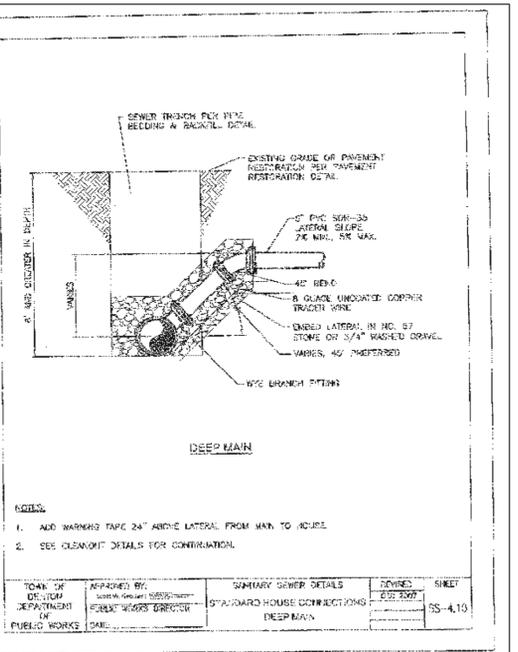
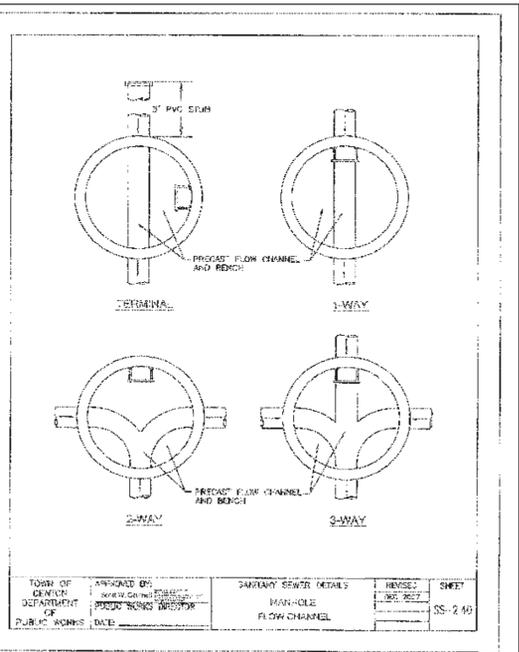
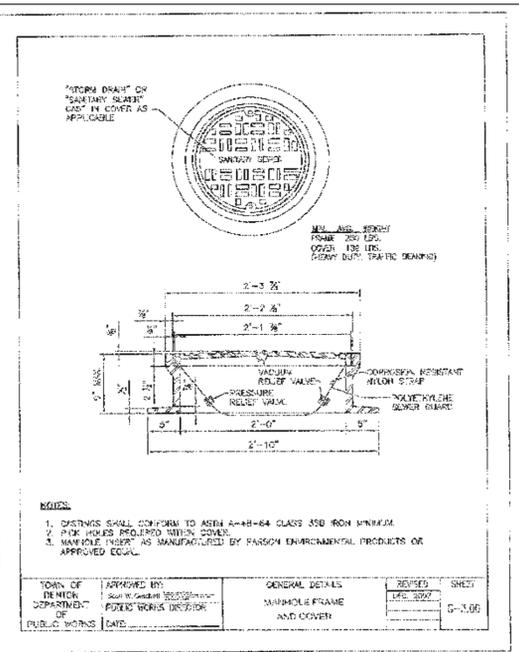
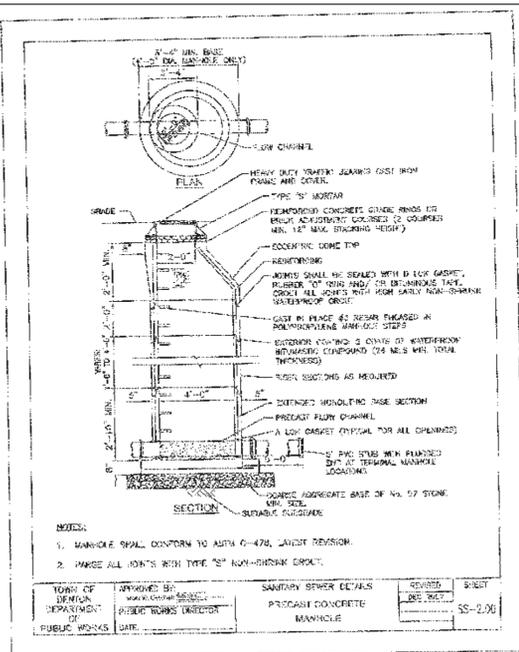
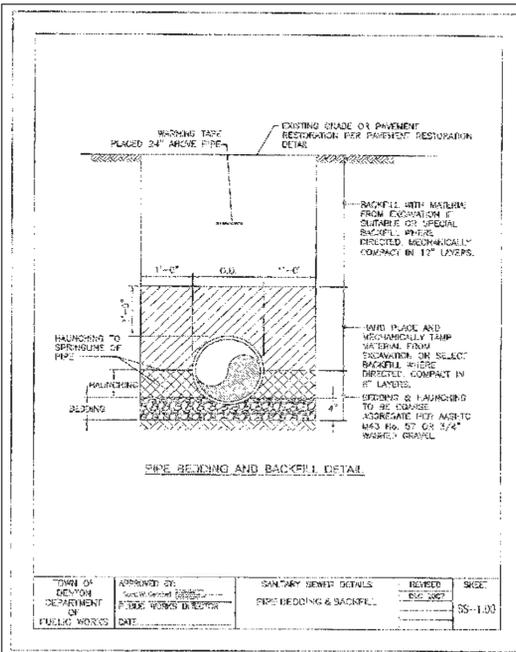
- RAMP APPLICATION KEY**
- REFERENCE MARYLAND SHA STANDARD DETAIL 655.13 (MODIFIED)
 - REFERENCE MARYLAND SHA STANDARD DETAIL 655.12 (MODIFIED)
 - REFERENCE TOWN OF DENTON DETAIL PW-6.00



SIDEWALK RAMP GRADING DETAILS
SCALE: 1"=10'



<p>DESIGN PROFESSIONAL: J.P.M.</p> <p>DATE: 06/14/12</p>													
<p>REVISIONS</p> <table border="1"> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>1</td> <td>06/14/12</td> <td>REVISIONS PER SHA WRITTEN COMMENTS DATED 06/14/12</td> </tr> <tr> <td>2</td> <td>06/14/12</td> <td>REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14</td> </tr> <tr> <td>3</td> <td>07/25/14</td> <td>REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14</td> </tr> </table>		No.	DATE	DESCRIPTION	1	06/14/12	REVISIONS PER SHA WRITTEN COMMENTS DATED 06/14/12	2	06/14/12	REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14	3	07/25/14	REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14
No.	DATE	DESCRIPTION											
1	06/14/12	REVISIONS PER SHA WRITTEN COMMENTS DATED 06/14/12											
2	06/14/12	REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14											
3	07/25/14	REVISIONS PER SHA WRITTEN COMMENTS DATED 07/17/14											
<p>APPROVED BY: J.P.M.</p> <p>DESIGNED BY: J.P.M.</p> <p>DRAWN BY: J.P.M.</p> <p>LAYER LIST: B-12</p> <p>SCALE: 1"=50'</p> <p>ONLY PLANS INCORPORATING A SIGNED PROFESSIONAL SEAL ARE VALID. THIS PLAN HAS BEEN PREPARED SPECIFICALLY FOR THE CLIENT AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. © COPYRIGHT 2014, KERCHEK ENGINEERING, INC. ALL RIGHTS RESERVED.</p>													
<p>OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION</p> <p>100 MARKET STREET DENTON, MD 21048 Phone: 410-478-8200</p>	<p>PARCEL INFORMATION:</p> <p>TAX MAP 103 / GRID 13 / PARCEL 280</p> <p>GROSS AREA: 2.77 Acres</p> <p>ROW AREA: XX.XX Acres</p> <p>NET AREA: XXXX Acres</p>												
<p>CONSTRUCTION DETAILS</p> <p>WHARVES AT CHOPIANK CROSSING</p> <p>TOWN OF DENTON - CAROLINE COUNTY - MARYLAND</p>	<p>KERCHEK ENGINEERING, INC.</p> <p>ENGINEERS • PLANNERS • SURVEYORS</p> <p>413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847</p> <p>302-854-8800 (Voice) 302-854-8804 (Fax) www.kerchek.com</p>												
<p>JOB No: 12-0202M</p> <p>PLAN DATE: Mar. 26, 2012</p> <p>SHEET No.: D2</p>	<p>Wharves at Chopiank Crossing, Inc. Oct 14, 2014 (14-02)</p>												



REVISIONS

NO.	DATE	DESCRIPTION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE AND BELIEF IT COMPLIES WITH ALL APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE REQUIREMENTS OF THE STATE OF MARYLAND.

DESIGN PROFESSIONAL DATE

APPROVED BY: A.S.C. DRAWN BY: J.O.H. LAYER LIST: B.H.

OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
 14014 RIVER ST. #100
 FORT WASHINGTON, PA 19041-1400
 PHONE: 484.844.4330
 FAX: 484.844.4330

PARCEL INFORMATION:
 TAX MAP 103 / GRID 13 / PARCEL 280
 GROSS AREA: 2.77 Acres
 NET AREA: .XX.XX Acres
 NEW PAVED: .XX.XX Acres

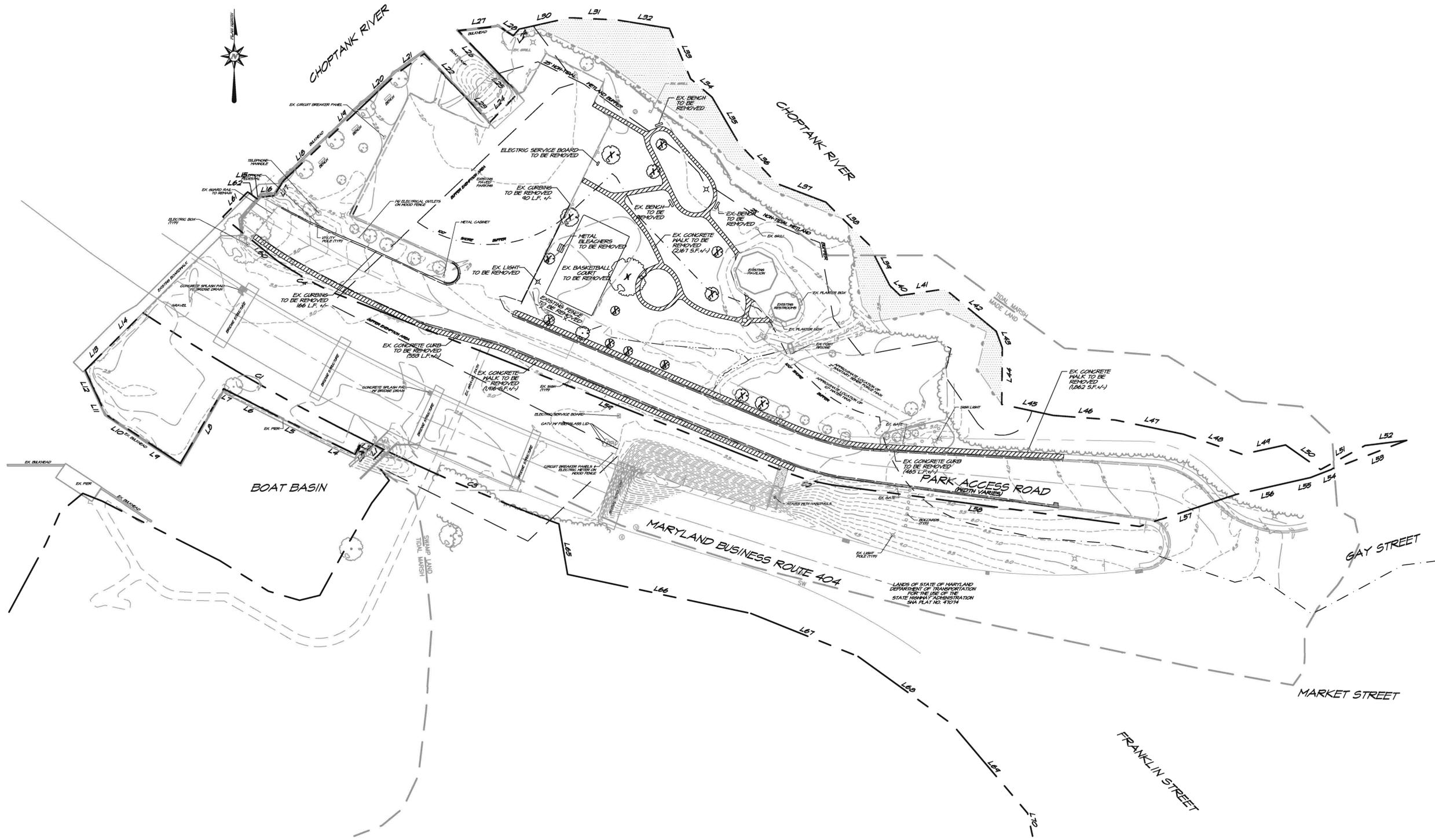
UTILITY DETAILS
 WHARVES AT CHOPTANK CROSSING
 TOWN OF DENTON - CAROLINE COUNTY - MARYLAND

KEI ENGINEERS, INC. PLANNERS SURVEYORS
 14014 RIVER ST. #100
 FORT WASHINGTON, PA 19041-1400
 (610) 302-8543 (Fax) www.kei-engineers.com

JOB No: 12-0202M
 PLAN DATE: Mar. 26, 2012
 SHEET No.: D3

DEMOLITION NOTES

- FOR THE EXTENT OF DEMOLITION, REFER TO SITE AND UTILITY PLAN FOR LIMITS OF NEW CURBING, SIDEWALK PAVING, ETC. AND CORRESPONDING PROPOSED CURB/SIDEWALK TIE-IN POINTS TO EXISTING INFRASTRUCTURE.
- EXISTING ENTRANCE ROAD SIDEWALK, CURB/CUTTER AND PAVEMENT TO BE REMOVED TO LIMITS SHOWN PER THIS SHEET AND PER THE SITE AND UTILITY PLAN.
- EXISTING UTILITY INFORMATION REGARDING SEWER AND WATER PROVIDED BY TOWN OF DENTON.
- REFER TO DEMOLITION SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- DEMOLITION SHALL BE CONDUCTED IN AS LEAST DISRUPTIVE MANNER AS POSSIBLE. CONTRACTOR IS INFORMED THE AREA IS IN A FUNCTIONING WATER ACCESSIBLE PARK. CONTRACTOR IS RESPONSIBLE FOR JOB SAFETY AND TRAFFIC CONTROL. DISRUPTION TO CONTINUED PARK ACCESS SHALL BE KEPT AT A MINIMUM, AND COORDINATED WITH THE ENGINEER.
- EXISTING PAVILION, REST ROOMS AND SURROUNDING ASPHALT ACCESS PAD TO REMAIN.
- BOTH EXISTING ENTRANCE GATES TO BE RE-INSTALLED POST CONSTRUCTION. REMOVE AS NECESSARY TO ACCOMMODATE CONSTRUCTION.
- BENCHES, BLEACHER, LIGHTS, TRASH CANS, PICNIC TABLES AND GRILLS TO BE REMOVED AND RETAINED BY THE TOWN OF DENTON. THE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR THE REMOVAL AND RELOCATION OF THESE ITEMS AND SAID TASKS SHALL NOT BE MADE AS PART OF THE CONTRACT FOR THIS PROJECT.
- ALL CONSTRUCTION MATERIALS AND DEBRIS TO BE DISPOSED OF WHILE ADHERING TO ALL APPLICABLE LOCAL, STATE, AND FEDERAL GUIDELINES.



No.	DATE	DESCRIPTION
3	04/29/14	REVISIONS PER SIA VERBAL COMMENTS
2	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 09/25/13
1	09/27/12	REVISIONS PER SIA WRITTEN COMMENTS DATED 06/14/12

REVISIONS

DESIGN PROFESSIONAL: _____ DATE: _____

DESIGNED BY: _____ DRAWN BY: _____
 A.S.K. J.O.M.

APPROVED BY: _____
 A.S.K. J.O.M.

SCALE IN FEET (1" = 40')

0' 40'

ONLY PLANS INCORPORATING A NAMED PROFESSIONAL SEAL ARE VALID. THIS PLAN HAS BEEN PREPARED SPECIFICALLY FOR THE CLIENT AND IS NOT TO BE REPRODUCED OR USED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. © COPYRIGHT 2014, KERCHER ENGINEERING, INC. ALL RIGHTS RESERVED.

OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
 105 MARKET STREET
 DENTON, MD 21546
 Phone: 410-678-8355
 Fax: 410-678-8359

TAX MAP 103 / GRID 13 / PARCEL 280
 GROSS AREA: 2.37 Acres
 ROW DEED: XXXX
 NET ACRE: XXXX

EXISTING CONDITIONS & DEMOLITION PLAN
WHARVES at CHOPTANK CROSSING
 TOWN OF DENTON - CAROLINE COUNTY - MARYLAND

KERCHER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847
 302.854.8804 (Voice) 302.854.8802 (Fax) www.kercherinc.com

JOB No: 12-0202M
 PLAN DATE: Mar. 26, 2012
 SHEET No.: **E1**



Wharves at Choptank Crossing, Inc. Oct. 14, 2014 (13.52)

SYM.	QUAN.	SCIENTIFIC NAME	COMMON NAME	SPECIFICATION
WATER QUALITY GARDEN PLANT LIST - THIS SHEET ONLY				
SHADE TREES				
AR	3	ACER RUBRUM	RED MAPLE	7' CAL., MIN.
BN	2	BETULA NIGRA	RIVER BIRCH	7' HGT. MULTI-STEM
QB	5	QUERCUS BICOLOR	SWAMP WHITE OAK	7' CAL., MIN.

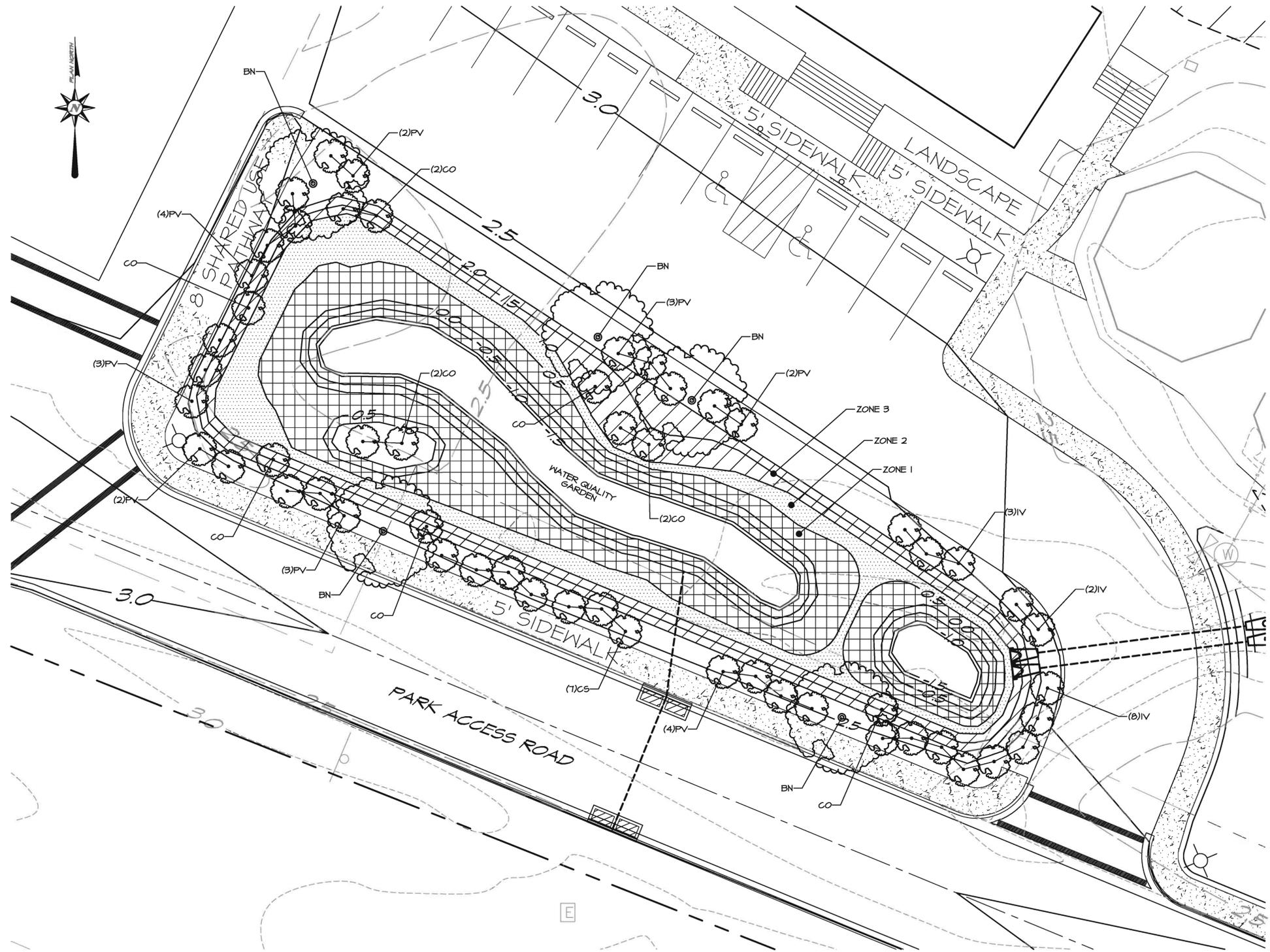
ZONE 1-PLAN ELEVATIONS 0' TO 1.5'; RANDOM MASSES:				
	65	NUPHAR LUTEA	SPATTERDOCK	1" PLUG, 3' O/C
	65	SAGITTARIA LATIFOLIA	DUCK POTATO	1" PLUG, 3' O/C

ZONE 2-PLAN ELEVATIONS 1.5' TO 2.0'; RANDOM MASSES:				
	153	PELTANDRA VIRGINICA	ARROW ARUM	1" PLUG, 18" O/C
	153	PONTEDERIA CORDATA O/C	PICKERELWEED	1" PLUG, 18" O/C
	153	SAURURUS CERNUS	LIZARDS TAIL	1" PLUG, 18" O/C

ZONE 3- PLAN ELEVATIONS 2.0' TO 3.0'; RANDOM MASSES:				
	122	IRIS VERSICOLOR	BLUE FLAG IRIS	1" PLUG, 18" O/C
	122	IRIS PSEUDOCORUS	YELLOW FLAG IRIS	1" PLUG, 18" O/C
	122	SCORPUS VILLOSIUS	SOFT STEM BULL RUSH	1" PLUG, 18" O/C
	122	LOBELIA CARDINALIS	CARDINAL FLOWER	1" PLUG, 18" O/C
	122	SCORPUS CYPERINUS	WOOD GRASS	1" PLUG, 18" O/C
	122	JUNCUS EFFUSUS	SOFT RUSH	1" PLUG, 18" O/C
	122	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	1" PLUG, 18" O/C
	122	VERNONIA NOVEBORACENSIS	VERNONIA NOVEBORACENSIS	1" PLUG, 18" O/C

PLAN ELEVATIONS 3.0' AND ABOVE				
SHADE TREES				
BN	5	BETULA NIGRA 'HERITAGE'	RIVER BIRCH	6' HGT. MULTI-STEM
SHRUBS				
CO	11	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	1 QUART, 5-6' O/C
CS	7	CORNUS SERICEA	RED OSIER DOGWOOD	1 GAL., 5-6' O/C
IV	13	ITEA VIRGINICA	VIRGINIA SWEET SPIRE	1 GAL., 5-6' O/C
GRASS				
PV	23	PANICUM VIRGATUM	SWITCH GRASS	2 GAL., 5-6' O/C

TURF
ALL UNDEVELOPED AREAS NOT OTHERWISE LANDSCAPED SHALL BE LIMED AT 100#/ACRE, AND SEEDED (8#/1000)
OR SOODED WITH A TURF TYPE FESCUE BLEND CONTAINING 10% PERENNIAL RYE GRASS. FERTILIZE ALL PLANTED AREA
WITH A HIGH PHOSPHOROUS STARTER FERTILIZER AT 200#/ACRE



NO.	DATE	DESCRIPTION
1	04/20/14	REVISIONS PER SH. VERBAL COMMENTS DATED 08/14/12
2	06/27/12	REVISIONS PER SH. WRITTEN COMMENTS

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE LAWS OF THE STATE OF MARYLAND.

DESIGN PROFESSIONAL DATE

APPROVED BY: ASAC
DESIGNED BY: J.D.H.
DRAWN BY: J.D.H.
LAYER USE: B-202A
SCALE: IN FEET (1" = 10')

OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
100 W. MARKET STREET, SUITE 100
DENTON, MD 21048
Phone: 410.279.4326
Fax: 410.279.4326

PARCEL INFORMATION:
TAX MAP 103 / GRID 13 / PARCEL 280
GROSS AREA: 2.77 Acres
NET AREA: .3333 Acres

KEI
KIRCHER ENGINEERING, INC.
ENGINEERS • PLANNERS • SURVEYORS
115 WEST MARKET STREET, SUITE 100, DENTON, MD 21048
302.854.9062 (Voice) 302.854.9064 (Fax) www.kircherinc.com

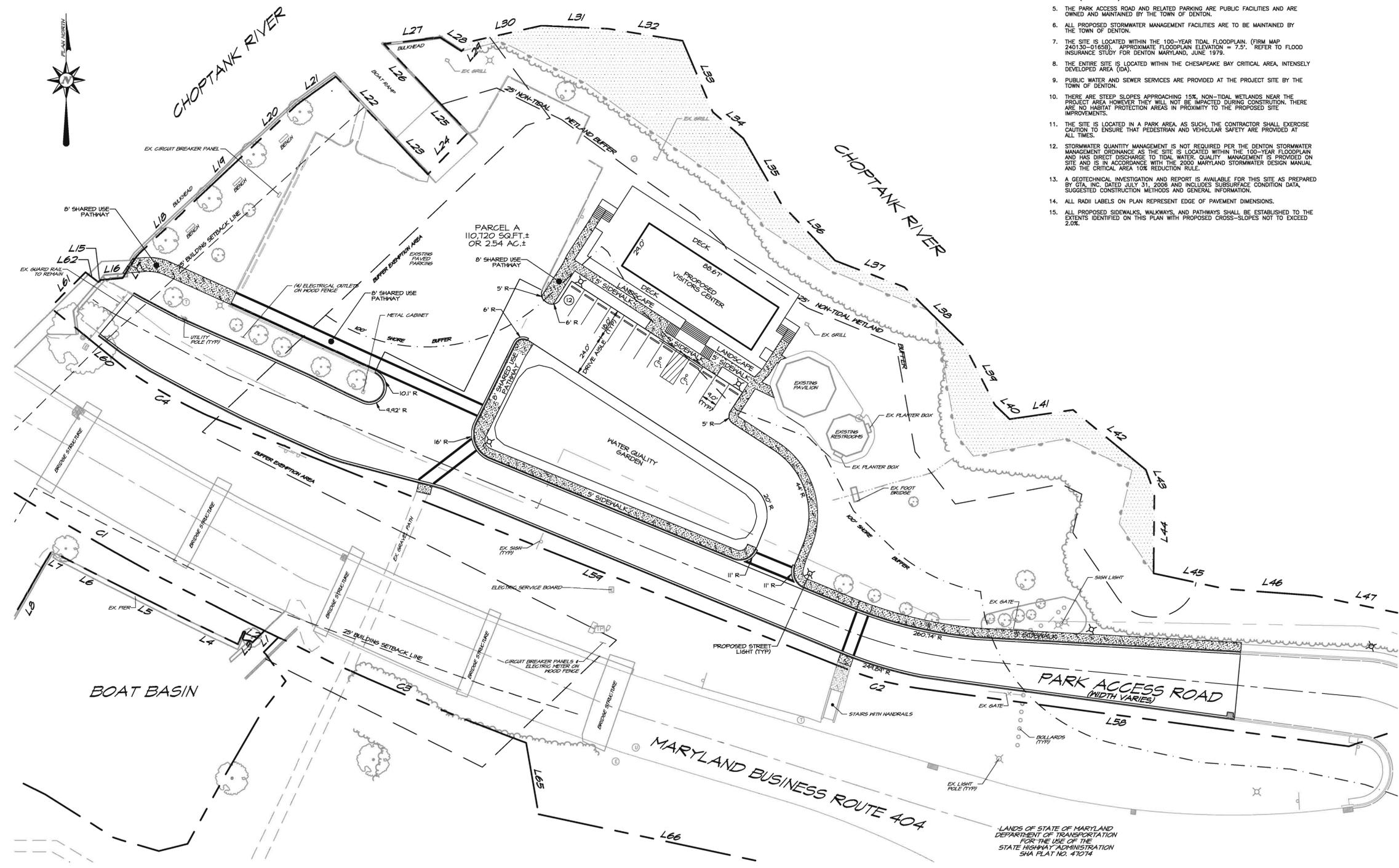
JOB No: 12-0202M
PLAN DATE: Mar. 26, 2012
SHEET No.: L2

CURVE TABLE						
CURVE	RADIUS	ARC LENGTH	TANGENT	DELTA	CHD. BEARING	CHD. LENGTH
C1	1671.02'	216.58'	108.44'	7°25'34"	S 60°23'36" E	216.43'
C2	185.94'	47.45'	23.72'	14°51'10"	N 75°02'59" W	47.33'
C3	1671.02'	154.74'	77.37'	5°18'20"	S 67°03'49" E	154.68'
C4	331.39'	52.86'	26.43'	9°36'40"	N 60°39'58" W	52.81'

LINE TABLE		
LINE	BEARING	DISTANCE
L1	S 45°52'30" W	9.79'
L2	N 68°47'50" W	6.00'
L3	S 42°01'40" W	4.12'
L4	N 64°23'20" W	35.59'
L5	N 63°31'18" W	43.24'
L6	N 63°06'10" W	31.58'
L7	N 62°43'44" W	9.31'
L8	S 30°08'54" W	70.28'
L9	N 56°42'34" W	44.03'
L10	N 56°30'12" W	28.94'
L11	N 24°47'10" W	16.78'
L12	N 24°48'32" W	22.56'
L13	N 45°27'07" E	28.98'
L14	N 45°33'20" E	37.15'
L15	N 41°27'15" E	1.81'
L16	N 85°18'45" E	12.59'
L17	N 32°43'27" E	14.77'
L18	N 46°41'40" E	46.32'
L19	N 46°53'22" E	46.67'
L20	N 46°48'32" E	33.75'
L21	N 54°20'36" E	27.45'
L22	S 43°25'58" E	42.20'
L23	S 43°22'53" E	34.83'
L24	N 44°06'23" E	33.32'
L25	N 43°35'14" W	36.08'
L26	N 43°37'35" W	34.01'
L27	N 83°18'48" E	32.51'
L28	S 57°20'42" E	14.61'
L29	N 41°15'54" E	7.13'
L30	N 77°23'53" E	42.36'
L31	S 87°19'38" E	38.45'
L32	S 80°50'23" E	43.19'
L33	S 23°04'40" E	44.34'
L34	S 49°23'29" E	23.17'
L35	S 30°10'17" E	43.31'
L36	S 43°39'39" E	44.90'
L37	S 69°14'27" E	42.53'
L38	S 45°36'55" E	49.13'
L39	S 27°09'54" E	37.27'
L40	S 46°15'20" E	11.73'
L41	N 81°43'49" E	36.82'
L42	S 50°39'16" E	54.09'
L43	S 20°07'01" E	14.28'
L44	S 00°33'10" W	45.84'
L45	S 77°56'45" E	42.95'
L46	S 85°46'05" E	50.60'
L47	S 78°20'55" E	56.62'
L48	S 71°08'33" E	50.76'
L49	N 77°47'08" E	36.02'
L50	S 55°09'35" E	34.84'
L51	N 61°43'25" E	41.15'
L52	N 82°57'08" E	34.14'
L53	S 68°55'34" W	57.08'
L54	S 68°54'59" W	26.99'
L55	S 77°17'45" W	14.01'
L56	S 77°18'06" W	47.80'
L57	S 71°48'06" W	83.00'
L58	N 82°21'40" W	247.43'
L59	N 68°27'56" W	392.55'
L60	N 51°05'32" W	57.32'
L61	N 45°16'17" E	28.60'
L62	S 52°43'10" E	9.31'
L63	S 09°53'17" E	41.49'
L64	S 78°01'17" E	152.54'
L65	S 68°15'53" E	94.01'
L66	S 54°19'43" E	94.64'
L67	S 40°25'09" E	94.50'
L68	S 12°26'45" E	10.67'
L69	S 12°26'45" E	242.60'

GENERAL NOTES

1. THE PROJECT SITE IS KNOWN AS WHARVES AT CHOPTANK CROSSING, (TM 103.G 13.P 280), AND IS LOCATED IMMEDIATELY NORTH OF THE GAY STREET AND MARYLAND BUSINESS ROUTE 404 INTERSECTION IN DENTON, MARYLAND.
2. THE PURPOSE OF THESE PLANS IS TO OBTAIN SITE PLAN APPROVAL TO CONSTRUCT A NEW VISITOR CENTER AND ASSOCIATED SITE IMPROVEMENTS THAT WILL INCLUDE PARKING, LIGHTING, LANDSCAPING, UTILITIES, STORMWATER MANAGEMENT ETC.
3. THE BOUNDARY DEPICTED ON THIS PLAN IS A COMBINATION OF INFORMATION THAT WAS TAKEN FROM A SURVEY PERFORMED FOR THIS SITE BY LANE ENGINEERING, 117 BAY STREET EASTON, MD 21601 (JUNE 2008) AND A CONVEYANCE FROM THE STATE OF MARYLAND TO THE COMMISSIONERS OF DENTON AS DESCRIBED ON MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STATE ROADS COMMISSION PLAT NO. 58677 AND IS NOT THE RESULT OF A FIELD SURVEY OR PROPERTY RESEARCH CONDUCTED BY KERCHER ENGINEERING, INC. HORIZONTAL DATUM IS NAD 83.
4. A TOPOGRAPHIC SURVEY WAS PERFORMED FOR THE SITE BY KERCHER ENGINEERING, INC. (MARCH 2012). VERTICAL DATUM IS NAVD 88.
5. THE PARK ACCESS ROAD AND RELATED PARKING ARE PUBLIC FACILITIES AND ARE OWNED AND MAINTAINED BY THE TOWN OF DENTON.
6. ALL PROPOSED STORMWATER MANAGEMENT FACILITIES ARE TO BE MAINTAINED BY THE TOWN OF DENTON.
7. THE SITE IS LOCATED WITHIN THE 100-YEAR TIDAL FLOODPLAIN, (FIRM MAP 24013B-01658). APPROXIMATE FLOODPLAIN ELEVATION = 7.5'. REFER TO FLOOD INSURANCE STUDY FOR DENTON MARYLAND, JUNE 1979.
8. THE ENTIRE SITE IS LOCATED WITHIN THE CHESAPEAKE BAY CRITICAL AREA, INTENSELY DEVELOPED AREA (IDA).
9. PUBLIC WATER AND SEWER SERVICES ARE PROVIDED AT THE PROJECT SITE BY THE TOWN OF DENTON.
10. THERE ARE STEEP SLOPES APPROACHING 15%. NON-TIDAL WETLANDS NEAR THE PROJECT AREA HOWEVER THEY WILL NOT BE IMPACTED DURING CONSTRUCTION. THERE ARE NO HABITAT PROTECTION AREAS IN PROXIMITY TO THE PROPOSED SITE IMPROVEMENTS.
11. THE SITE IS LOCATED IN A PARK AREA AS SUCH, THE CONTRACTOR SHALL EXERCISE CAUTION TO ENSURE THAT PEDESTRIAN AND VEHICULAR SAFETY ARE PROVIDED AT ALL TIMES.
12. STORMWATER QUANTITY MANAGEMENT IS NOT REQUIRED PER THE DENTON STORMWATER MANAGEMENT ORDINANCE AS THE SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN AND HAS DIRECT DISCHARGE TO TIDAL WATER. QUALITY MANAGEMENT IS PROVIDED ON SITE AND IS IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL AND THE CRITICAL AREA 10% REDUCTION RULE.
13. A GEOTECHNICAL INVESTIGATION AND REPORT IS AVAILABLE FOR THIS SITE AS PREPARED BY GFA, INC. DATED JULY 31, 2006 AND INCLUDES SUBSURFACE CONDITION DATA, SUGGESTED CONSTRUCTION METHODS AND GENERAL INFORMATION.
14. ALL RADII LABELS ON PLAN REPRESENT EDGE OF PAVEMENT DIMENSIONS.
15. ALL PROPOSED SIDEWALKS, WALKWAYS, AND PATHWAYS SHALL BE ESTABLISHED TO THE EXTENTS IDENTIFIED ON THIS PLAN WITH PROPOSED CROSS-SLOPES NOT TO EXCEED 2.0%.



NO.	DATE	DESCRIPTION
1	08/27/13	REVISIONS PER SHAW VERBAL COMMENTS
2	02/14/14	REVISIONS PER SHAW WRITTEN COMMENTS DATED 09/25/13
3	04/30/14	REVISIONS PER SHAW VERBAL COMMENTS
4	09/27/12	REVISIONS PER SHAW WRITTEN COMMENTS DATED 09/19/12

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE LAWS OF THE STATE OF MARYLAND.

DESIGN PROFESSIONAL DATE

OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
 100 W. MARKET STREET, DENTON, MD 21040
 PHONE: 410.329.4339

DESIGNED BY: J.S.C.
 DRAWN BY: J.S.C.
 LAYER USE: B-02

SCALE: 1" = 30'

DATE: 08/27/13

PROJECT: WHARVES AT CHOPTANK CROSSING

TAX MAP 103 / GRID 13 / PARCEL 280
 GROSS AREA: 2.77 Acres
 NET AREA: XXX.XX Acres

© COPYRIGHT 2014, KERCHER ENGINEERING, INC.
 ALL RIGHTS RESERVED

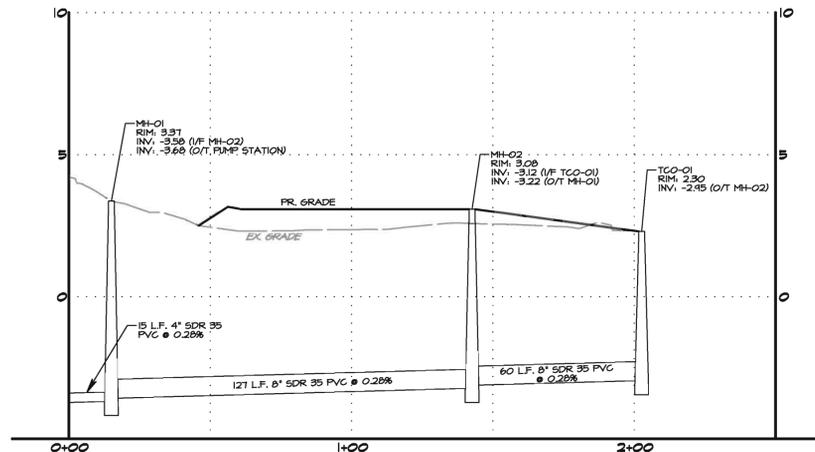
WHARVES AT CHOPTANK CROSSING
 TOWN OF DENTON - CAROLINE COUNTY - MARYLAND

KERCHER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 111 WEST MARKET STREET, DENTON, MARYLAND 21040
 302.854.9062 (Voice) 302.854.9064 (Fax) www.kercher.com

JOB No: 12-0202M
 PLAN DATE: Mar. 26, 2012
 SHEET No.: **R1**

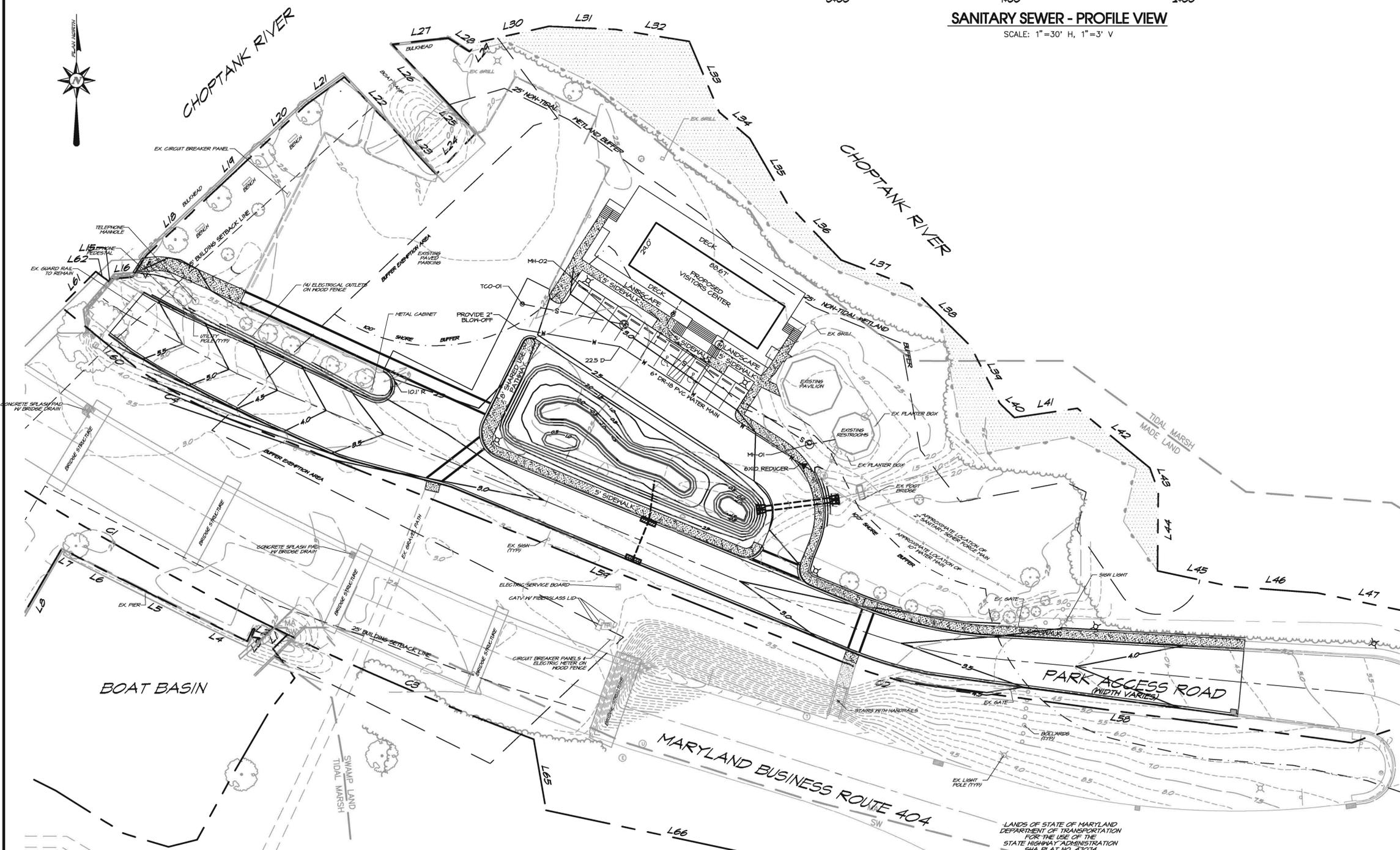
GENERAL NOTES

1. DOMESTIC WATER AND SANITARY SEWER SHALL HAVE A MIN. 10' HORIZONTAL SEPARATION AND 18" SEPARATION FOR CROSSINGS.
2. COORDINATE WITH ELECTRIC SERVICE PROVIDER FOR BUILDING AND PARKING LOT LIGHTING ELECTRIC SERVICE CONNECTIONS.
3. NEW STRUCTURE TO BE SERVED BY 6" SANITARY SEWER HOUSE CONNECTION.
4. WATER FITTINGS SHALL BE CLASS 50 DUCTILE IRON AND RESTRAINED WITH RETAINER GLANDS. ALL WATER SUPPLY PIPING SHALL MEET THE TOWN OF DENTON DETAILS AND SPECIFICATIONS. CONTAINED HEREIN. COORDINATE WITH ARCHITECTURAL PLANS FOR EXACT LOCATION OF SERVICE MAINS SHALL BE INSTALLED WITH 42" MIN. COVER.
5. DETAIL DESIGN OF PARKING LOT LIGHTING BY LICENSED ELECTRICIAN, CONTRACTOR TO COORDINATE.
6. ALL PAVEMENT MARKINGS SHALL BE WHITE EPOXY PAINT OR THERMOPLASTIC AND PLACED PER MUTCO AND ADA REQUIREMENTS. ALL STRIPING FOR PARKING STALLS SHALL BE 4" IN WIDTH, MINIMUM, AND ALL CROSSWALK STRIPING SHALL BE 12" IN WIDTH, MINIMUM.
7. CONTRACTOR SHALL OBTAIN INSPECTIONS FOR ALL UTILITY WORK PRIOR TO BACKFILL AND FOR ALL ROAD/CURB CONSTRUCTION. PROOF ROLL REQUIRED FOR BASE AND SUB-BASE.
8. ALL UTILITY CONSTRUCTION, MANHOLE/INLET/STRUCTURE INSTALLATIONS SHALL BE CONDUCTED PER ALL CURRENT SAFETY REGULATIONS INCLUDING OSHA REQUIREMENTS.
9. INSTALL 6"x6" P.T. LANDSCAPE TIMBERS BENEATH ENTIRE PERIMETER OF DECK AREA (45'x115'). INSTALL FILTER CLOTH AND FILL WITH 6" NO. 57 STONE.



SANITARY SEWER - PROFILE VIEW

SCALE: 1"=30' H, 1"=3' V



THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE QUANTITIES SHOWN ON THIS PLAN ARE FOR INFORMATIONAL AND PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL QUANTITIES TO HIS OWN SATISFACTION PRIOR TO BEGINNING CONSTRUCTION.

NO.	DATE	DESCRIPTION
1	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
2	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
3	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
4	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
5	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
6	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
7	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
8	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
9	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
10	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
11	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
12	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
13	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
14	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
15	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
16	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
17	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
18	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
19	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
20	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
21	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
22	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
23	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
24	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
25	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
26	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
27	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
28	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
29	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
30	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
31	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
32	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
33	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
34	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
35	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
36	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
37	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
38	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
39	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
40	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
41	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
42	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
43	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
44	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
45	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
46	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
47	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
48	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
49	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
50	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
51	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
52	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
53	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
54	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
55	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
56	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
57	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
58	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
59	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
60	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
61	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
62	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
63	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
64	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
65	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
66	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
67	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
68	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
69	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
70	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
71	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
72	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
73	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
74	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
75	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
76	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
77	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
78	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
79	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
80	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
81	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
82	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
83	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
84	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
85	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
86	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
87	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
88	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
89	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
90	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
91	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
92	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
93	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
94	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
95	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
96	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
97	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
98	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
99	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14
100	07/17/14	REVISIONS PER SIA WRITTEN COMMENTS DATED 07/17/14

REVISIONS

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLIES WITH THE APPLICABLE ORDINANCES OF THE TOWN OF DENTON AND THE LAWS OF THE STATE OF MARYLAND.

DESIGN PROFESSIONAL DATE

APPROVED BY: [Signature] DATE: [Date]

DESIGNED BY: J.P.H. DRAWN BY: J.P.H.

LAYER LIST: B-07

SCALE: 1" = 30'

ONLY PLANS INCORPORATING A NAMED PROFESSIONAL SEAL ARE VALID. THIS PLAN HAS BEEN PREPARED SPECIFICALLY FOR THE CLIENT AND IS NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF THE DESIGNER. ALL RIGHTS RESERVED. © COPYRIGHT 2014, KRCHEER ENGINEERING, INC.

OWNER/APPLICANT: DENTON DEVELOPMENT CORPORATION
 100 MARKET STREET
 DENTON, MD 21048
 Phone: 410-878-8200

PARCEL INFORMATION:
 TAX MAP 103 / GRID 13 / PARCEL 280
 GROSS AREA: 2.37 ACRES
 ROW AREA: XX.XX ACRES
 NET AREA: XX.XX ACRES

UTILITY PLAN
 WHARVES OF CHOPTANK CROSSING
 TOWN OF DENTON - CAROLINE COUNTY - MARYLAND

KRCHEER ENGINEERING, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 413 EAST MARKET STREET - GEORGETOWN, DELAWARE 19847
 302.854.8804 (Voice) 302.854.8804 (Fax) www.krccheer.com

KEI

JOB No: 12-0202M
 PLAN DATE: Mar. 26, 2012
 SHEET No.: U1