ECONOMIC RECOVERY PROJECT

Maryland Department of Transportation

State Highway Administration
Baltimore, Maryland
Invitation for Bids

Contract No. XX1045168

F.A.P No. AC-STP-NH-000A(369)E, ES-000A(369)E

Grind, Patch and Resurface Roadway Pavements

at Various Locations

Calvert County

FOR REVIEW PURPOSES ONLY

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

The State Highway Administration will only be responsible for the completeness of documents obtained directly from the State Highway Administration Cashier's Office.
Failure to attach all addenda may cause the bid to be irregular.

VENDOR I.D. NUMBER

_____

S.H.A. USE ONLY

Maryland Department of Transportation

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NOTICE TO BIDDERS

A "Pre-Bidding Session" has not been scheduled for this Project

SPECIAL NOTICE

A portion of the funding for this project is contingent on the passage of a federal infrastructure stimulus bill. Expenditures using this funding will be conditioned upon the availability of federal funds and the ability of this Contract to meet any special requirements of the final authorization bill. If either of these conditions cannot be met, the funding for this portion may be cancelled. However, this Contract may utilize other available funding.

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NOTICE

NOTICE TO CONTRACTORS

Effective <u>JUNE 12, 2008</u> all sealed bids for projects will be received by the State Highway Administration's Office of Construction Hanover Complex.

Address

7450 Traffic Drive
Hanover, Maryland 21076

FOR REVIEW PURPOSES ONLY

NOTICE TO CONTRACTORS

The Specifications utilized with this bid book are those issued by the Maryland State Highway Administration dated <u>July 2008</u>.

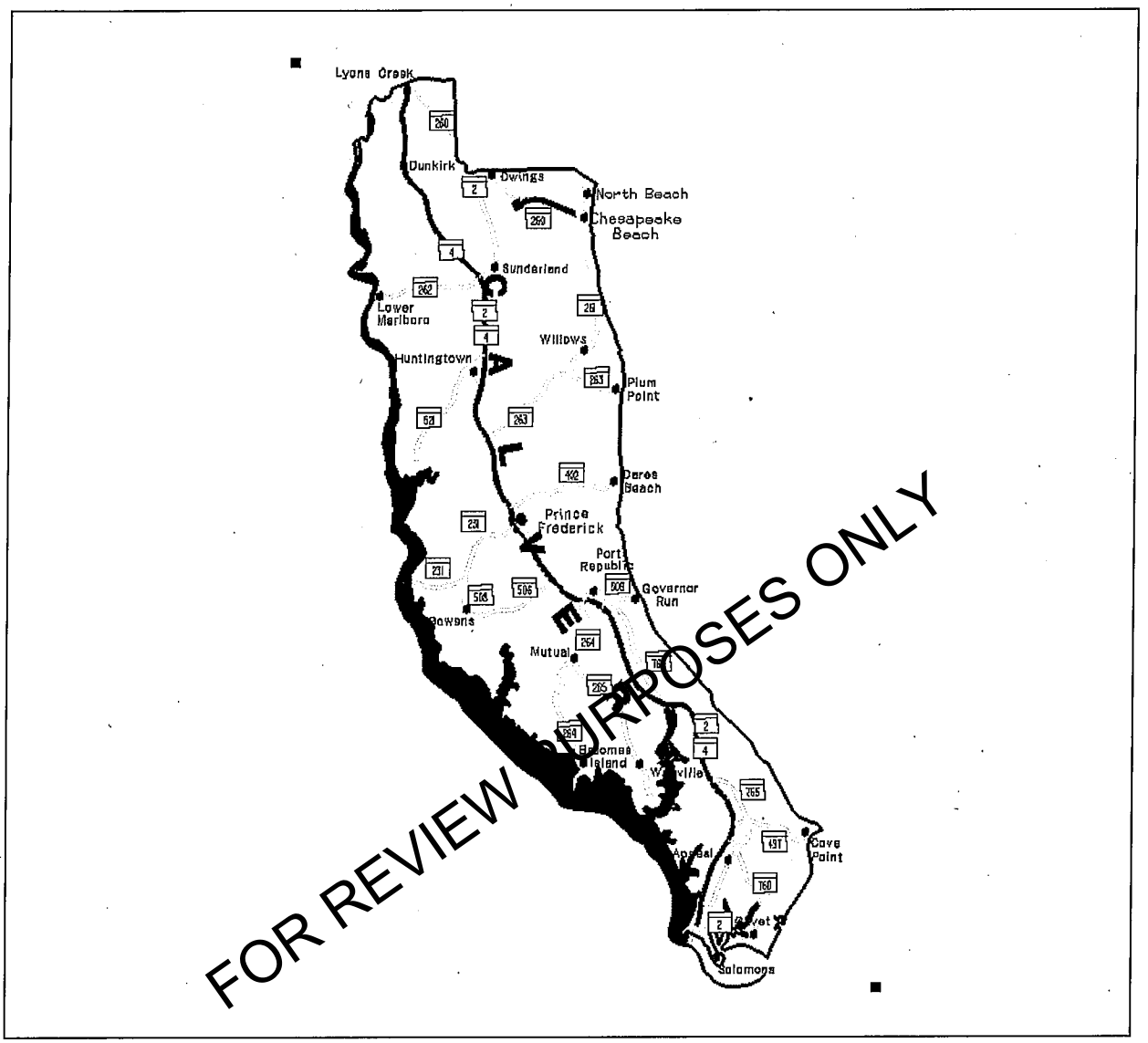
Copies may be purchased at:

Maryland State Highway Administration
Cashier's Office
211 East Madison Street
Baltimore, Maryland 21202
Phone 410-545-8490

FOR REVIEW PURPOSES ONLY

The purchase price of the July 2008 Specifications Book is $30.00. When material is mailed an additional fee of $5.50 will be charged.

S.H.A. CONTRACT NO.: XX1045168
FEDERAL AID PROJECT NO.: AC-STP-NH-000A(369)E, ES-000A(369)E



SCALE: NONE LOCATION MAP

"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 erosion and sediment 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."

REVIEWED AND APPROVAL RECOMMENDED

Collen Robinson

for **ASSISTANT DIVISION CHIEF HIGHWAY MAINTENANCE DIVISION**

APPROVED

Francis B. McGrath

for **DIRECTOR, OFFICE OF MAINTENANCE**

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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

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." When conformance with NCHRP Report 350 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.

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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).

(b) Temporary Barrier.

(1) Concrete Barrier.

(2) Traffic Barrier W Beam and Water Filled 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.

WORK ZONE DEVICES	IMPLEMENTATION SCHEDULE TO CONFORM TO NCHRP REPORT 350 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 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 criteria.
CATEGORY 3 (a) Truck Mounted Attenuators (TMA) (b) Temporary Barriers (1) Concrete Barrier (2) Traffic Barrier W Beam and Water Filled Barrier (c) Temporary End Treatments	All devices shall conform to NCHRP Report 350 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 criteria, until compliance dates are established. Use of these devices shall comply with the provisions of Part 6 of the MUTCD.

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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.

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ATTACHMENTS

A. Employment Preference for Appalachian Contracts (included in Appalachian contracts only)

I. GENERAL

1. 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.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 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 DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or

b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

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 and 41 CFR 60) 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 Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American 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 State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his 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, preapprenticeship, and/or on-the-job training."

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

FOR REVIEW PURPOSES ONLY

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 minority group employees.

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 minority groups 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 minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group 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, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246 as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group 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 his 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 his avenues of appeal.

6. **Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

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. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

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 minority group and women employees 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 his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. 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 best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best 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.

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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 SHA 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 minority and women 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 minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) 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 SHA.

8. **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.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **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 completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

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

(1) The number 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;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA 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. If on-thejob training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers 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 (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV

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and the DOL poster (WH-1321) or Form FHWA-1495) 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. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, 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 paragraphs 4 and 5 of this Section IV.

b. 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.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers as defined in Section IV.4(c), when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification 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 DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour 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.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional 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. Said 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

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. 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 or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a 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.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

(1) 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 DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/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 Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees 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 employee 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 listed in 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

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actually performed. Where a contractor or subcontractor 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-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) 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 journeyman-level 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 for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) 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 DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. 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.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level 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-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor 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. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified on an applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. **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.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor 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, as 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 SHA contracting officer 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.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her 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, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which

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such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies 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 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof 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. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found 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 and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

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

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such 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 the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. 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 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, 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 SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions 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.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than $1,000,000 (23 CFR 635) the contractor shall:

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a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

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 State. 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).

a. "Its own organization" shall be construed to include only workers employed and paid directly 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, assignee, or agent of the prime contractor.

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 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 VII 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 SHA 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 SHA 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 SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

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 SHA 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. 333).

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. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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, the following notice 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:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

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,

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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 not more that $10,000 or imprisoned not more than 5 years or both."

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

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

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

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

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

1. **Instructions for Certification - Primary Covered Transactions:**
(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary 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 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 primary 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 department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary 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," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary 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 primary 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 Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. 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.

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.

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Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement 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;

c. 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 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary 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 Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

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," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

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.

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 may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

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 Covered Transactions:

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 participation in this transaction 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.

* * * * *

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(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:

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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 his or her bid or proposal that he or she 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.

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

CONTRACT GOALS

FOR THE PURPOSE OF THIS CONTRACT, A GOAL OF **12** PERCENT 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.

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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.

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 (MD-EEO-006), and Minority Contractor Unavailability Certificate (OOC46).

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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.

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.

FOR REVIEW PURPOSES ONLY

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 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;

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.

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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).

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 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.

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(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.

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(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.

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9. Bidder Use of MBE 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 MBE Modifications

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

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 quarterly 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 quarterly reports shall be due on the 15th calendar day of January, April, July, and October. 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.

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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.

FOR REVIEW PURPOSES ONLY

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;

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.

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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.

FOR REVIEW PURPOSES ONLY

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.

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_____ (DATE)

_____ (SIGNATURE)

_____ (PRINT SIGNATURE)

_____ (TITLE)

CONTRACTOR AND RAILROAD PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

INCLUDED

In addition to other forms or bonds required under the terms of the Contract and/or specifications, the Contractor shall obtain, furnish and keep in force insurance policies as follows:

(A) CONTRACTOR'S PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

Limits not less than $2,000,000 for Bodily Injury and/or Death and Property Damage, per occurrence, within an aggregate limit of $6,000,000 for the term of the policy.

(B) CONTRACTOR'S PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE INSURANCE

If any part of the work is to be performed by a subcontractor the prime Contractor shall carry in his own behalf insurance in the same limits as set forth in paragraph (A).

(C) RAILROAD PROTECTIVE PUBLIC LIABILITY AND PROPERTY DAMAGE LIABILITY INSURANCE

This policy shall name the appropriate Railroad as "The Insured" to comply with the Standard Uniform Policy for Railroad Protective Liability and Property Damage Insurance developed and adopted in 1958 by AASHTO-AAR and by Federal Aid Policy Guide 646A Subchapter G, Subpart A, Sections 646.101 through 646.111. Limits in the following amounts:

Bodily Injury and/or Death and Property Damage Liability limit not less than $2,000,000 per occurrence within an aggregate limit of $6,000,000 for the term of the policy.

FOR REVIEW PURPOSES ONLY

GENERAL

The original of policy (C) shall be furnished to and approved by the Railroad. For (A) and (B), the certificates shall be furnished to the Administration's Engineer and to the Railroad on request. In all instances, the Contractor shall furnish evidence to the Administration's Engineer and Railroad that the insurance has been purchased and is in force until the Contract is completed and accepted.

The Contractor is prohibited from entering Railroad Property until the Insurance Policies have been approved. Policies, certificates, notices of cancellation or changes, etc., shall be sent by the Contractor direct to the Engineering Officer of the Railroad. The Contractor and his insurance representative shall reconcile all policy requirements to the satisfaction of the Railroad and the Administration's Engineer.

For the Contractor's insurance broker's information, it is estimated that IFB_Railroad percent of value of the subject Contract will be performed within 50 ft of the rails of the Railroad's track.

The cost for the insurance will not be measured but will be incidental to the Contract lump sum price for Mobilization, Section 108. If an item for Mobilization is not provided, the cost of the insurance will be incidental to the other items specified in the Contract Documents.

FOR REVIEW PURPOSES ONLY

AMTRAK and/or CONRAIL RAILROADS

Whenever a Contract requires bridge erection, demolition or other hoisting operations over the tracks of either of the above-named railroads, the Contractor shall be aware that the following information shall be submitted for approval to the Office of the Chief Engineer of that railroad.

(a) Plan view showing locations of cranes, operating radii, with delivery or disposal location shown.

(b) Crane rating sheets showing cranes to be adequate for 150 percent of the lift. Crane and boom nomenclature shall be indicated.

(c) Plans and computations showing weight of pick.

(d) Location plan showing obstructions and indicating that the proposed swing is possible.

(e) Data sheet listing number, type, size and arrangement of slings or other connecting equipment. Include copies of catalog or information sheets of specialized equipment.

(f) A complete procedure shall be included, indicating the order of lifts and any repositioning or rehitching of the crane or cranes.

(g) Temporary support of any components or intermediate stages shall be shown.

(h) A time schedule of the various stages shall be shown, as well as a schedule for the entire lifting procedure.

Additional information other than that listed above, may be requested by the railroad and shall be provided by the Contractor. All negotiations necessary to receive the railroad's approval of this phase of the work are between the Contractor and the railroad.

The Contractor shall furnish copies to the Administration's Engineer of all pertinent information as it pertains to agreements or approvals between the Contractor and the railroad that affects the Contract.

Authority to proceed with this phase of the schedule or operations will not be granted by the Engineer until a copy of the railroad's written approval has been furnished to the Engineer.

The cost to furnish the above data, required by the railroad, will not be measured for payment but will be incidental to the related pay items specified in the Contract Documents.

FOR REVIEW PURPOSES ONLY

PREVAILING WAGE
INSTRUCTIONS FOR THE CONTRACTOR

PAYROLLS.

Non-Federally Funded Contracts. For Non-Federally funded projects, which include prevailing wage rates**,** the prime Contractor and each subcontractor shall submit two copies of their payroll records. One copy shall be submitted to the Project Engineer and one shall be sent to the Maryland State Commissioner of Labor & Industry, Room 607, 1100 N. Eutaw Street, Baltimore, MD 21201, where they will be available for inspection during business hours. 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.

FOR REVIEW PURPOSES ONLY

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 payrolls shall include the employees' full name, classification, social security number, and home address.

(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 to 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 the Wage and Hour Team, 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.

FOR REVIEW PURPOSES ONLY

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.

INQUIRIES.

Requests for information or questions shall be addressed to:

Maryland State Highway Administration
Office of Highway Development
Wage and Hour Team
707 N. Calvert Streets, MS C-102
Baltimore MD 21203-0717
Fax: 410-209-5001

FOR REVIEW PURPOSES ONLY

WAIS Document Retrieval
GENERAL DECISION: MD20080025 02/08/2008 MD25

Date: February 8, 2008
General Decision Number: MD20080025 02/08/2008

Superseded General Decision Number: MD20070025

State: Maryland

Construction Types: Highway

Counties: Calvert, Charles and Queen Anne's Counties in Maryland.

HIGHWAY CONSTRUCTION PROJECTS (Excluding tunnels, building structures in rest area projects and railroad construction; bascule, suspension and spandrel arch bridges; bridges designed for commercial navigation; bridges involving marine construction; and other major bridges)

Modification Number	Publication Date
0	02/08/2008

SUMD1999-004 04/07/1999

	Rates	Fringes
Carpenter	$ 19.79	1.02
Cement Mason/Finisher	$ 11.40	.71
Guardrail Installers	$ 11.05	1.65
Ironworker, Reinforcing	$ 16.38	7.30
Laborers:		
Asphalt Rakers	$ 8.85	2.41
Concrete Laborers	$ 11.27	.31
Flaggers	$ 7.00	.65
Unskilled	$ 8.92	1.39
Painter, Line Striper	$ 12.21	1.67
Power equipment operators:		
Asphalt Spreaders	$ 10.15	1.92
Backhoes	$ 10.03	1.72
Gradalls	$ 14.33	4.06
Graders	$ 11.56	2.92
Loaders	$ 12.69	1.36
Milling Machine	$ 9.07	.52
Pavers	$ 9.48	2.36
Rollers	$ 10.93	2.30
Screedmen	$ 10.18	2.42

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Truck Driver, Dump.....$ 11.42 1.12

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

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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)).

In the listing above, the "SU" designation means that rates listed under the identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

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:

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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.

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END OF GENERAL DECISION

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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.

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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;

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.

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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

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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.

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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 which the work was performed. Records shall be maintained in an easily understandable and

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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.

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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

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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.

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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 Worcestar	
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** (number to be filled in by the Administration) 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 journeyperson 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.

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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 journeyperson status or has been employed as a journeyperson. This includes a person gainfully employed as a journeyperson 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 journeyperson 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:

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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 journeyperson 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 journeypersons.

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The Contractor shall pay the trainees at least 60 percent of the appropriate minimum journeyperson'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.

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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.

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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.

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PROJECT DESCRIPTION

This Contract consists of grinding, patching, and resurfacing hot mix asphalt pavements at various locations in Calvert County. This work may also include bridge decks, approaches, and deep patching.

The following is a list of anticipated capital projects that are scheduled to be included under this Contract if funding is available. The Administration reserves the right to add or delete from the following project list.

MD 260, from Cornwall Rd to Mt Harmony Bridge & WB Ramp
MD 264, from Ball Rd to Williams Warf Rd
MD 760, from Olivet Rd to Trueman Rd
MD 261, from Chesapeake Village / Bayside Rd to US Government Rd
MD 264, from Ball Rd to MD 4
MD 2/4, from MD 264 to Parkers Creek Rd

This is a non-exclusive Contract. It does not include all work expected to be performed in the designated county. Therefore, at times, other Contractors may be performing work that is not associated with this Contract in this county.

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SPECIFICATIONS

The Contractor's operations shall conform to all applicable State and Local regulations. All work on this project shall be done in accordance with the Maryland Department of Transportation, State Highway Administration's Specifications entitled, "Standard Specifications for Construction and Materials" dated July 2008 and the companion manual entitled "General Provisions for Construction Contracts," revisions thereof, or additions thereto, and the Special Provisions included in this Invitation for Bids.

In case of discrepancy between the Special Provisions and all other provisions contained in the contract, the Engineer will be the sole authority as to the proper procedure to follow.

EMPLOYMENT AGENCY

The Maryland Department of Labor, Licensing & Regulation (DLLR), Division of Employment & Training, can be found on the Web at: http://www.dllr.state.md.us/county/

WORK ASSIGNMENTS, TASK TIME, AND LIQUIDATED DAMAGES

Work assignments will be issued to the Contractor in the form of a 'Notice to Proceed with Task' (NTP/T) letter for each assigned task. The NTP/T letter will include, but not be limited to the following information: the limits of the work; the scope of work to be performed; the NTP/T 'on or before' date; and the Number of Working days allocated for the task (Task Time).

The Task Time will commence on the first day of work or the NTP/T date, whichever comes first. Liquidated Damages in the amount listed in the Proposal Form Packet will be assessed for unauthorized extensions beyond the number of Working Days allocated for each task.

The Contractor shall notify the Engineer at least 24 hours prior to beginning work at any location.

ESTIMATED QUANTITIES

All construction items and quantities in these Special Provisions are provided for use when and as directed by the Engineer. The quantities for these items are established for the purpose of obtaining a bid price. The quantities for these items may be increased or decreased without any adjustment to the contract unit price or the item(s) may be deleted entirely from the Contract by the Engineer without negotiation. The Contractor will not be allowed to submit a claim against the Administration for any adjustment to the contract unit price should the item(s) be increased, decreased or eliminated. GP-4.04, Variations in Estimated Quantities, will not apply to this Contract.

FOR REVIEW PURPOSES ONLY

TRAFFIC SIGNS, CONES, AND PLASTIC DRUMS

Bid items have been established for temporary traffic signs, and plastic drums. These items will only be paid once. After initial payment all use of these items will be incidental to the per day item for Maintenance of Traffic.

Traffic cones will not be a separate pay item but will be considered incidental to the bid item for Maintenance of Traffic.

SHOULDER BACK-UP USING TOPSOIL

A bid item has been established for shoulder edge drop off using topsoil. The square yard price will be full compensation for placement of topsoil, seeding, and installation of Type A soil stabilization matting.

GENERAL ISSUES

1. The Engineer will schedule work so that a minimum of 200 tons of hot mix asphalt is placed per work location. This 200 ton minimum does not apply to bridge decks and approach items, intersections, patching and maintenance of traffic hot mix asphalt items.

2. After completion of surface course, permanent pavement marking will be done by the Administration unless otherwise indicated by the Administration.

3. The Contractor shall resurface the roadway within 24 hours of completing grinding operations.

4. No bid items have been established for fertilizer, seeding and straw mulching. These items will be considered incidental to the square yards item for topsoil for shoulder edge drop-off.

5. Hot mix asphalt patching shall be in accordance with Section 505.

6. Bid items established for adjusting existing inlet are for traffic bearing grates.

INTERSECTION LOOP DETECTORS

When the grinding operation is within 500 feet of signalized intersection approaches, the Contractor shall notify the Chief of the Signal Operations Section, at 410-787-7650, a minimum of 72 hours prior to any grinding. Prior to loop installation; call 410-787-7635, to coordinate installation and final inspection.

When road surfaces are to be overlaid by the Contractor, loop detectors and micro probes shall be installed prior to final road overlay.

The replacement of loop detectors and micro probes may involve the installation of 6’ x 6’ loop detectors, 6’ x 30’ loop detectors, 500’ and 1000’ lead micro probes, 1” non-metallic flexible conduit – sleeve, and/or 3” schedule 80 PVC conduit – directional bored or encased in concrete (slotted).

Intersection Operation - There will be no change in the intersection operation of affected signalized intersections.

FOR REVIEW PURPOSES ONLY

GRINDING HOT MIX ASPHALT PAVEMENT

In addition to Section 508 of the Specifications, the following conditions apply:

1. The hot mix asphalt surface shall be grinded down a minimum of 1 inch and a maximum of 2 inches or to the top of the existing concrete, whichever is encountered first, or as directed by the Engineer. At some locations on the project, field adjustments will be required based on the type of pavement being grinded.

2. The grinding operations shall only be performed in one lane at a time. When grinding more than 1 1/2 inches in any one lane, the Contractor shall grind the full width of the roadway.

3. Grinding locations may include open or closed sections of roadway. On closed sections, the Contractor shall grind to the face of the curb.

4. All grinded Hot Mix Asphalt material, referred to hereafter as RAP (recycled Asphalt Pavement), becomes the sole property of the contractor. Any and all RAP will be disposed of as stated in Section TC-6.11 Construction and Waste Material.

HOT MIX ASPHALT SURFACE FOR BRIDGE APPROACHES & DECKS

1. Bridge approaches & decks designated by the Engineer shall be adjusted by the removal of sufficient depth of existing wearing surface to allow for replacement with new hot mix asphalt.

2. The areas to be removed shall be variable in length, but shall not be less than the existing lane width. The depth of removal will be determined by the Engineer.

3. The method of removal is not specified, however, it must be approved by the Engineer prior to starting work. Resurfacing shall be in accordance with Section 504 of the Specifications and shall be completed during the same work shift in which the existing pavement is removed.

4. Hot mix asphalt surface used for bridge approaches & decks will be measured and paid for at the Contract unit price per ton. Payment will be full compensation for all material, delivery, tack coat, placement, compaction, labor, tools, equipment, and incidentals needed to complete this work.

5. Removal of pavement will be measured and paid for at the Contract unit price bid per square yard. Payment will be full compensation for all removal of material, hauling, disposal, labor, tools, equipment, and incidentals needed to complete this work.

FOR REVIEW PURPOSES ONLY

VERTICAL ADJUSTMENT OF EXISTING UTILITY COVERS

All existing manholes, valve boxes and inlets shall be adjusted to meet the resurfacing elevations. Adjustments of manholes, valve boxes or inlets will not be measured for payment, as per Section 504.04 of the specifications. The Contractor shall, before the placement of the surface course, submit for approval by the Engineer his/her method of adjustment. Adjustment of State-owned manholes, valve boxes and inlets, including approval by the Engineer of the construction method used, shall be accomplished prior to placement of surface course.

It shall be the Contractor's responsibility to notify the municipality/ utility owner to adjust their manholes, valve boxes and meters. The Contractor shall not be compensated for any delays resulting from municipality/utility company adjustments.

TIE-INS FOR ENTRANCES AND SIDE ROADS

The Contractor shall take into consideration, when preparing this bid that notched tie-ins shall be made at entrances and connecting roads to the extent directed by the Engineer. All costs thereby shall be included in and considered incidental to the other pay item(s) set up in this Contract.

METHOD OF PAYMENT

Payment will be made according to Section TC-7 of the Specifications (monthly estimates).

RIGHT-OF-WAY STATUS

There is no right-of-way required to complete the work requested for in this Contract.

STATUS OF PERMITS

There are no environmental permits needed for this Contract**.**

FOR REVIEW PURPOSES ONLY

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 October 1, 2004 the bidder is required to complete the AAP information in the Contract Provisions, Proposal Form Packet. 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.marylandroads.com. 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.

PAYMENT OF STATE OBLIGATIONS. Electronic funds transfer will be used by the State to pay the Contractor for any Contract expected to exceed $200,000 and any other State payments unless the State Comptroller's Office grants the Contractor an exemption.

Therefore, by submitting a response to this solicitation, the Bidder/Offer agrees to accept payment by electronic funds transfer unless the State Comptroller's Office grants an exemption.

Prior to the Award of the Contract the selected Bidder/Offer shall register using the X-10 Vendor Electronic Funds (EFT) Registration Request Form. The instructions and the form are located on the internet at compnet.comp.state.md.us/gad.

Any request for exemption shall be submitted to the State Comptroller's Office at the address specified on the X-10 form and shall include the business identification information as stated on the form and include the reason for the exemption.

FOR REVIEW PURPOSES ONLY

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 ten working days 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. 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:

Office of Maintenance
Contracts & Procurement Team
7491 Connelley Drive
Hanover, Maryland 21076
or
FAX to (410) 582-9862

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

ADDENDUM. Bidders are encouraged to verify any issuance of Addenda before submitting a bid. Addenda will be posted on the Administration's Internet Site at www.marylandroads.com. Addenda can be located by clicking on Contracts, Bids & Proposals; and Addendum. Confirmation of receipt of any Addenda issued should be faxed to 410-582-9862.

PROFILE INFORMATION. Contractors are encouraged to update their company's profile information with the Cashier's Office at 410-545-8490 (voice) or 410-545-8020 (fax) to facilitate in the distribution of Addenda and other pertinent information regarding these Contract Documents.

FOR REVIEW PURPOSES ONLY

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 or **$1,000.00** per day, whichever is more 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.

FOR REVIEW PURPOSES ONLY

TC SECTION 7
PAYMENT

TC-7.09 PRICE ADJUSTMENT FOR DIESEL FUEL

(a) General. 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 diesel fuel.

The monthly index price used for calculating the PA will be the On-Highway Diesel Fuel Price for the Central Atlantic Region published by the U.S. Department of Energy, Energy Information Administration, at www.eia.doe.gov. The monthly index price will be the average of the weekly prices posted for the month.

The prevailing base index price will be the price specified for Diesel Fuel currently posted at www.marylandroads.com (Business with SHA/Contracts, Bids and Proposals) prior to bid opening. A historical database will be maintained by the Administration.

The adjustment factors for specific categories of the work are included in Table TC-7.09. Category A-E will apply to this Contract.

The PA will be calculated when the index for the current month increases or decreases more than 5 percent of the base index. The total dollar amount of fuel adjustment will be limited to 5 percent of the Contract Total Amount as bid. If an increase or decrease in costs exceeds 5 percent of the Contract Total Amount as bid, no further adjustment will be made.

Computations for adjustment will be as follows:

Percent Change = [(E – B)/B] x 100

PA= [E – (B x D)] x F x Q

Where:

PA = Amount of the price adjustment
E = Current monthly index price
B = Prevailing base index price
D = 1.05 when increase is over 5%; 0.95 when decrease is over 5%
F = Applicable fuel adjustment factor from Table TC-7.09
Q = Quantity of individual units of work

FOR REVIEW PURPOSES ONLY

TABLE TC-7.09

COST ADJUSTMENT FACTORS FOR DIESEL FUEL			
CATEGORY	**DESCRIPTION**	**UNITS**	**FACTOR**
A	Sum of Cubic Yards of Excavation in Category 200	Gallons/Cubic Yard	0.29
B	Sum of Structure Concrete in Category 400	Gallons/Cubic Yard	1.892
C	Sum of Aggregate Base in Category 500	Gallons per ton	0.60
D	Sum of HMA in Category 500	Gallons per ton	3.50
E	Sum of Rigid Concrete Pavement in Category 500	Gallons/Cubic Yard	0.95

FOR REVIEW PURPOSES ONLY

Any difference between the checked final quantity and the sum of quantities shown on the monthly estimates for any item will be adjusted by the following formula:

$$FPA = [(FCQ \div PRQ) - 1] \times EA$$

Where:

FPA = Final PA for the item that increased or decreased
FCQ = Final Checked Quantity of the item
PRQ = Total Quantity of the item reported on the most recent estimate
EA = Total PA of the item shown on most recent estimate

(b) Price Adjustment Criteria and Conditions. The following criteria and conditions will be considered in determining the PA.

(1) Payment. The PA will be computed on a monthly basis. PA resulting in increased payment to the contractor will be paid under the item Price Adjustment for Diesel Fuel. 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.

The monthly base price for determining a PA for all work performed after the Contract completion date, as revised by an approved time extensions, will be the monthly base price at the time of the Contract completion date (as extended) or at the time the work was performed, whichever is less.

(2) Expiration of Contract Time. When eligible items of work are performed after the expiration of Contract time with assessable liquidated damages, no PA will be made.

(3) Final Quantities. Upon completion of the work and determination of final pay quantities, an adjusting Change Order will be prepared to reconcile any difference between estimated quantities previously paid and the final quantities.

(4) Inspection of Records. The Administration reserves the right to inspect the records of the Contractor to ascertain actual pricing and cost information for the diesel fuel used in the performance of the applicable items of work..

(5) Additional Work. When applicable items of work, as specified herein, are added to the Contract as additional work, in accordance with the Contract provisions, no PA will be made for the fluctuations in the cost of diesel fuel unless otherwise approved by the Engineer. The Contractor shall use current fuel costs when preparing required backup data for work to be performed at a negotiated price.

(6) Force Account. Additional work performed on a force account basis, reimbursement for material, equipment, and man-hours as well as overhead and profit markups will be considered to include full compensation for the current cost of diesel fuel.

FOR REVIEW PURPOSES ONLY

CATEGORY 100
PRELIMINARY

LAPTOP COMPUTER FOR FIELD USE

143 **DELETE:** 103.03.06 Microcomputer System for all Offices in its entirety.

INSERT: The following.

103.03.06 Laptop Computer for field use.

(a) Laptop Computer Unit – Panasonic Toughbook 29 (or equal).

(1) CPU: Intel Pentium M Processor. Minimum processor speed of 1.6 GHz; 2MB L2 Cache; 400MHz FSB.

(2) Minimum storage: 80 GB HDD

(3) Minimum memory: 80GB HDD: 512MB SDRAM (DDR2), expandable to 1536MB

(4) Display: 13.3" 1024x768 (XGA) transmissive, daylight-readable TFT Active Matrix C LCD 80GB HDD w/touchscreen. External video support up to 1280x1024 at 16 million colors. Intel. 915GMS graphic controller.

(5) Expansion Slot: PC CardType II x 2 or Type III x 1; Secure Digital (SD) Card.

(6) Multimedia Pocket: Combo Drive (DVD-ROM/CD-RW).

(7) Interface: External Video – MiniD-sup 15 pin; Parallel – D-sup 25 pin; Port Replicator – 80 pin (reinforced); Serial – D-sup 9 pin; USB 2.0 – 4 pin x 2; 10/100/1000 Ethernet – RJ-45; 56K Modem – RJ-11.

(8) Wireless Lan: Intel Sierra Wireless AirCard CDMA 2000 1X RTT wireless network cards, wireless network interface card (NIC) on CDMA 2000 1X networks / Minimal power consumption achieved by superior card power management to provide MCMS system administration.

(9) Power Supply: 2 Lithium Ion Battery Packs with overcharge protection, an AC Adaptor, and a vehicle DC Power Adaptor that operates the laptop and at the same time charges the laptop's internal battery.

(b) Operating System. Minimum Microsoft® Windows XP – all Microsoft Windows Critical Updates shall be installed.

(c) Software.

(1) Microsoft® Office 2007 Professional for Windows™ or later.

(2) Symantec® pcAnywhere32 for Windows™ version 12.0 or later.

FOR REVIEW PURPOSES ONLY

(3) Antivirus software shall be installed and configured to perform an automatic update when the microcomputer system connects to the internet. Antivirus software approved for SHA web email: *Norton, McAfee, Sophos, or ETrust.

(*Norton Internet Security includes both Antivirus and a Personal Firewall).

(d) Accessories / Integrated Options.

(1) Wide Area Wireless Solutions: EDGE with external SIM slot; CDMA 1XEVDO.

(2) Bluetooth™.

(3) Global Positioning System (GPS) Receiver.

(4) Backlit Keyboard-sealed rubber or plastic emissive.

(5) Maintenance agreement to provide for possible down time.

(e) Notes.

(1) The laptop computer shall be completely set up ready for use on or before the Pre-Construction Conference.

(2) All software stated above shall be supplied on original disks with manuals and be retained by the Engineer for the duration of the Contract.

(3) If for any reason the system fails to operate, the system shall be replaced or repaired within 48 hours.

(4) When the laptop computer is no longer required, the Construction Management software system including original user/operator guide manuals, program disks, and all data files will be removed by the Engineer and delivered to the District Engineer and become the property of the Administration. The laptop computer shall remain the property of the Contractor.

(5) Contractor shall provide wireless broadband service for the laptop with high speed wireless data access of up to 2.4 Mbps.

FOR REVIEW PURPOSES ONLY

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

All work in the Annapolis vicinity requires that contact shall be made with D5 Traffic, D5 Construction, and the City of Annapolis to ensure that there are no conflicting special events or construction activity.

FOR REVIEW PURPOSES ONLY

TEMPORARY LANE OR SHOULDER CLOSURE SCHEDULE			
ROADWAY	**# LANE(S) / SHOULDER CAN BE CLOSED**	**DAY OF THE WEEK**	**CLOSURE PERIOD (TIME OF DAY)**
US 50 (Exit 21 thru Exit 27), I-97 (2-lane sections), I-695, MD 295, US 301 (Waldorf area)	0/0 0/1 0/0 0/1 1/1 2/1 (if at least 3 lanes in one direction)	Mon-Fri. Mon-Fri. Mon-Fri. Sun-Thur Sun-Thur Sun-Thur	5am-9am 9am-3pm 3pm-8pm 8pm-10pm 10pm - 5am 12 midnight - 5am
MD 2/4 (thru Prince Frederick), MD 5 Bus., MD 70, MD 235 (undivided section), MD 435, MD 450, MD 665	0/0 0/1 0/0 0/1 1/1	Mon-Fri. Mon-Fri. Mon-Fri. Sun-Thur Sun-Thur	5am-9am 9am-3pm 3pm-8pm 8pm-10pm 10pm - 5am
All other roads	0/0 1/1 0/0 0/1 1/1 2/1 (if at least 3 lanes in one direction)	Mon-Fri Mon-Fri Mon-Fri Sun-Thur Sun-Thur Sun-Thur	5am-9am 9am-3pm 3pm-8pm 8pm-10pm 10pm-5am 12 midnight - 5am

FOR REVIEW PURPOSES ONLY

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 ≥ 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, a truck-mounted attenuator (TMA) with support structure designed for attaching the system to the work vehicle, and arrow panel (arrow mode for multilane roadways and caution mode on two-lane, two-way roadways) The work vehicle size and method of attachment shall be as specified in the TMA manufacture's specification as tested under NCHRP 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 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 or 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 30 minutes prior to actual time lane/shoulder closure or restriction is permitted. 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 30 minutes prior to actual time lane/ shoulder closure or restriction is permitted.

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 10 ft. 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.

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

FOR REVIEW PURPOSES ONLY

CATEGORY 100
PRELIMINARY

SECTION 104 — MAINTENANCE OF TRAFFIC

168 **DELETE**: Section 104.11 TEMPORARY PAVEMENT MARKINGS. in its entirety.

INSERT: The following.

104.11 TEMPORARY PAVEMENT MARKINGS.

104.11.01 DESCRIPTION. Furnish, install, and remove temporary pavement markings as specified in the Contract Documents or as directed by the Engineer. These markings shall include lines, letters, numbers, arrows, and symbols.

104.11.02 MATERIALS.

Removable Preformed Pavement Marking Material	Refer to the
Nontoxic Lead Free Waterborne Pavement Markings	Contract Documents
Black Out Tape	QPL

104.11.03 CONSTRUCTION.

104.11.03.01 Quality Assurance/Quality Control. Quality control testing shall be completed by the Contractor's Administration certified technicians. The Engineer will complete the quality assurance checks in conformance with MSMT 729 by performing the Nighttime Visibility Evaluations.

104.11.03.02 Warranty Period. The Contractor shall maintain and be responsible for any defects in the pavement markings for a period of 180 days from the date of application. The Contractor shall replace the pavement markings as necessary within this period as directed by the Engineer at no additional cost to the Administration. Refer to GP-5.11.

104.11.03.02 Application and Removal. The pavement markings shall be applied in conformance with the manufacturer's recommendations and the Contract Documents. Markings shall be applied in the same direction as the flow of traffic. The markings shall be located as specified in the Contract Documents or as directed by the Engineer.

Pavement markings may be applied to either new or existing paved surfaces. When applied to newly paved surfaces, the markings shall be placed before traffic is allowed on the pavement. Nontoxic lead free waterborne pavement markings shall be used for all temporary pavement markings except for the final surface. However, the Contractor may use removable preformed pavement markings at no additional cost to the Administration.

When at the "end of season", the temperatures are too low to allow the placement of removable tape on the final surface, a written exception request may be submitted to the Engineer to allow the use of nontoxic lead free waterborne paint in lieu of removable tape until the following striping season.

When it is appropriate to shift lanes, all nonapplicable pavement markings within the travel way and adjacent to the travel way as directed by the Engineer shall be completely removed.

FOR REVIEW PURPOSES ONLY

Surface Condition. Prior to application of pavement markings, the pavement surface shall be clean, dry, and free of all contaminants, including curing compound, dirt, and loose particles. Residual pavement markings shall be removed. Loose or poorly constructed markings shall also be removed.

Pavement Marking Removal. All removable preformed pavement markings shall be completely removed prior to application of the permanent markings. On stage construction or final surfaces of portland cement concrete pavements, any objectionable adhesive residue shall be removed by water blasting or other methods as may be approved by the Engineer. Open flame is prohibited to remove adhesive residue, or any pavement markings. The Contractor shall remove all nonapplicable pavement markings so that there is no damage to the existing or final surface.

Retroreflectance. The initial retroreflectance readings for temporary pavement markings shall be a minimum of 250 and 150 millicandellas/lux/square meter for white and yellow, respectively. The Engineer will monitor the pavement markings in conformance with MSMT 729 during the Contractor's 180 day period of responsibility.

FOR REVIEW PURPOSES ONLY

104.11.04 MEASUREMENT AND PAYMENT. Payment for Removable Preformed Pavement Markings, Removal of Removable Preformed Pavement Markings, Nontoxic Lead Free Waterborne Pavement Marking Paint, and the Removal of Existing Pavement Markings will be measured and paid for using one or more of the items listed below and as specified in the Contract Documents.

The payment will be full compensation for furnishing, placing, complete removal of lines, letters, numbers, arrows, symbols, and the removal of all residue. In addition, payment will cover maintenance and replacement during the 180 day period, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. Removal and replacement of temporary pavement markings required beyond the 180 day period will be measured and paid for at the Contract unit price for the pertinent temporary pavement marking item.

Temporary markings replaced during the 180 day period as a result of plowing (as determined by the Engineer) will be paid for at the Contract unit price for the pertinent temporary marking item.

(a) Nontoxic Lead Free Waterborne Pavement Marking Paint-in width specified-per linear foot.

(b) Removable Preformed Pavement Line Markings-in width specified-per linear foot.

(c) Removable Preformed Letters, Symbols, Arrows, and Numbers per each.

(d) Removal of Removable Preformed Pavement Markings-any width-per linear foot.

(e) Removal of Removable Preformed Letters, Symbols, Arrows and Numbers per each.

(f) Removal of Existing Pavement Line Markings-any width per linear foot.

(g) Removal of Existing Letters, Symbols, Arrows, and Numbers per each.

(h) Black Out Tape Lines-in width specified-per linear foot.

(i) Removal of Black Out Tape Lines-any width-per linear foot.

CATEGORY 100
PRELIMINARY

SECTION 104 — MAINTENANCE OF TRAFFIC

104.21 CELLULAR TELEPHONES.

104.21.01 DESCRIPTION. Furnish and maintain new or like new cellular telephones for use by the appropriate Administration personnel. Each telephone shall be furnished with a hands-free device and be delivered to the Engineer at time of Notice to Proceed, fully activated and operational. They shall remain operational until returned to the Contractor at final acceptance of the entire project in conformance with GP-5.13.

104.21.02 MATERIALS.

Cellular Telephones	As approved by the Engineer

104.21.03 CONSTRUCTION. Not applicable.

104.21.04 MEASUREMENT AND PAYMENT. The number of cellular telephones required for this Contract is **one**. The cellular telephones will not be measured but will be incidental to the Contract price for Maintenance of Traffic unless otherwise specified in the Contract Documents. The payment will be full compensation for furnishing the telephones and hands-free devices, activation fees, battery replacement, monthly service fees, extended coverage charges, air time (peak and nonpeak time per minute), roaming rates, long distance fees in conformance with the schedules provided, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. If any of the telephones become defective, are stolen, or for any other reasons do not function as intended, they shall be replaced in-kind at no additional cost to the Administration. Nonfunctioning or stolen telephones shall be replaced within eight hours after the Contractor is notified by the Engineer.

Ownership of the telephones will remain with the Contractor. The Administration assumes no responsibility or liability for the condition of the telephones when they are returned.

FOR REVIEW PURPOSES ONLY

CATEGORY 100
PRELIMINARY

SECTION 104 — MAINTENANCE OF TRAFFIC

104.31 ACCESSIBLE PEDESTRIAN MAINTENANCE OF TRAFFIC.

104.31.01 DESCRIPTION. Provide and maintain an accessible pedestrian route, to the "maximum extent feasible", throughout the project's limits. When an existing pedestrian access route within the public right of way is blocked by construction, alteration, or maintenance activity, an alternate accessible pedestrian route shall be provided.

The phrase to the "maximum extent feasible" applies in areas where the nature of an existing facility or site conditions makes it virtually impossible to comply fully with applicable accessibility standards through a planned alteration. In these circumstances, the alternate accessible pedestrian route shall provide the maximum physical accessibility that is feasible, or a design waiver must be approved by SHA's Office of Highway Development.

104.31.02 MATERIALS. Not applicable

104.31.03 CONSTRUCTION. The following considerations shall be taken into account when addressing accessible pedestrian maintenance of traffic:

(a) All pedestrians, including persons with disabilities, shall be provided with a reasonably safe, convenient and accessible path that replicates as much as practicable the existing pedestrian facilities.

(b) The width of the existing pedestrian facility should be maintained if practical. When it is not possible to maintain a minimum width of 60 in. throughout the entire length of the pedestrian route, a minimum width of 36 in. shall be provided with 60 x 60 in. passing zones at least every 200 ft, to allow individuals in wheelchairs to pass.

(c) Traffic control devices and other construction materials and features shall not intrude into the usable width of the sidewalk, temporary pathway or other pedestrian facility.

(d) Signs and other devices mounted lower than 7 ft above the temporary pedestrian pathway shall not project more than 4 in. into accessible pedestrian route.

(e) A smooth, continuous hard surface shall be provided throughout the entire length and width of the pedestrian route throughout construction. There shall be no curbs or vertical elevation changes greater than 1/4 in. in grade or terrain that could cause tripping or be a barrier to wheelchair use. Vertical elevation differences between 1/4 in. and 1/2 in. shall be beveled at a maximum 2:1 slope. The slip resistance coefficient is .80 minimum using test method C 1028 (dry method).

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(f) When channelization is used to delineate a pedestrian pathway, a continuous detectable edging should be provided throughout the length of the facility such that pedestrians using a white cane can follow it. Edging should protrude at least 6 in. above the surface of the sidewalk or pathway with the bottom of the edging a maximum of 2.5 in. above the surface

(g) Temporary ramps shall be provided when an alternate pedestrian route crosses a curb and no permanent ramps are in place. The width of the ramp shall be a minimum of 36 in. and the slope of the ramp shall not exceed 10:1. Temporary detectable warning mats must be installed at street crossings and signalized entrances. The slip resistance coefficient is .80 minimum using test method C 1028 (dry method).

(h) When possible, an accessible pedestrian route shall be provided on the same side of the street as the disrupted route. When it is not feasible to provide a same-side accessible pedestrian route an accessible pedestrian detour route shall be provided.

(i) Information regarding closed pedestrian routes, alternate crossings, and sign and signal information shall be communicated to pedestrians with visual disabilities by providing devices such as audible information devices, accessible pedestrian signals or barriers and channelizing devices that are detectable to the pedestrians traveling with the aid of a white cane or who have low vision.

(j) It is desirable that pedestrians cross to the opposite side of the roadway at intersections rather than mid-block. Appropriate signing shall be placed at the intersections.

(k) Access to transit stops shall be provided and maintained at all times.

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104.31.04 MEASUREMENT AND PAYMENT. Unless otherwise specified, Accessible Pedestrian Maintenance of Traffic will not be measured but the cost will be incidental to the Lump Sum item for Maintenance of Traffic.

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 Calvert County. 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.

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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.

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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.

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CATEGORY 300
DRAINAGE

SECTION 308 — EROSION AND SEDIMENT CONTROL

308.01 DESCRIPTION.

253 **ADD:** The following after the third paragraph.

General Notes.

(a) MDE Notification. If an Erosion and Sediment Control Permit is issued for this project, notify the Administration and MDE in writing or by telephone (410) 537-3510 at the following points:

(1) Pre-construction meeting.

(2) Erosion and sediment control meeting (minimum 7 working days prior to commencing earth disturbing activities).

(3) Following installation of initial sediment control measures.

(4) During installation of major sediment control basins/traps.

(5) Prior to removal or modification of any sediment control structures.

(6) Prior to removal of all sediment control devices.

(7) Prior to final acceptance by the Administration.

(b) Ingress/Egress Controls. Protect all points of construction ingress and egress to prevent the deposition of materials on public roads. Immediately remove all materials deposited on public roads. The flushing of road surfaces is prohibited.

Control all ingress and egress points through the use of a stabilized construction entrance conforming to 308.03.30.

(c) Inspection. Inspect all erosion and sediment control measures daily and maintain continuously in an effective operating condition.

(d) Shutdowns and/or Penalties. Total compliance with the approved erosion and sediment control plan is expected at all times. In cases where the Contractor is found to be in non-compliance, the Administration may take steps to impose selected or total shutdowns and impose per day penalties for non-compliance.

The Administration may impose a total or partial shutdown if the project may adversely impact the waters of the State.

(e) Record Keeping. Make the project's approval letter, approved erosion and sediment control plans, approved change requests, daily log books and test reports available on-site for inspection by duly authorized officials of MDE.

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(f) Erosion and Sediment Control Excavation. Place silt removed from control devices in an approved waste site either on or off the project. Material stored on-site may be reused once it is dried and if it conforms to the Administration's requirements for embankment or any unspecified need.

(g) Off-Site Utility Work. Follow these additional best management practices for sediment control for utility construction in areas outside of designed controls:

(1) Call "Miss Utility" at 1-800-257-7777 48 hours prior to the start of work.

(2) Place excavated material on the high side of the trench.

(3) Backfill, compact and stabilize trenches for utility installations at the end of each working day. When this is not possible, follow (4).

(4) Place temporary silt fences immediately downstream of any disturbed area intended to remain disturbed for more than one day.

(h) Sensitive Areas. No construction activities are allowed within specified sensitive areas of the project without prior notification of the Engineer. Designate a responsible party to monitor all work in these areas to assure that reasonable care is taken in or adjacent to these areas. Areas considered sensitive are defined as: floodplains, wetlands (tidal, nontidal and associated buffers) critical areas, forested areas, archeological sites, historic sites, parkland, and open water.

(i) Standard Stabilization Note. Following initial soil disturbance or redisturbance, complete permanent or temporary stabilization within seven (7) calendar 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 days (14) as to all other disturbed or graded areas on the project site.

(j) Site Information (Not for Bidding Purposes).

(1) Total area of site	TBD acres
(2) Area disturbed	TBD acres
(3) Area to be roofed or paved	TBD acres
(4) Total cut	TBD cubic yards
(5) Total fill	TBD cubic yards
(6) Off-site waste/borrow area location (if known)	TBD

(k) Incremental Stabilization. Refer to the current Maryland Standards and Specifications for Soil Erosion and Sediment Control for the incremental stabilization of cuts and fills.

(l) Disturbed Areas. Place excavated trench material for any storm drain pipe and underdrain pipe installation on the high side of the trench. Backfill, compact, and stabilize trenches for any storm drain pipe and underdrain pipe installations at the end of each working day.

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Stabilize all other disturbed areas at the end of the working day. Place silt fence downgrade of any areas that cannot be stabilized at the end of the work day such that all runoff from the disturbed area will be filtered.

(m) Removal of Controls. Establish permanent stabilization for all contributory disturbed areas and obtain permission from MDE and the Administration prior to prior to the removal of sediment control measures.

Immediately stabilize any areas disturbed by the removal of sediment control measures.

(n) Notice of Enforcement. Sediment and erosion control regulations will be strictly enforced.

308.01.04 Incentive/Liquidated Damages Payments.

Delete: The entire paragraph.

INSERT: The following.

The total incentive awarded for this Contract will not exceed $0.00. The rating quarter incentive payment for this contract is $0.00. A final incentive payment for this contract is $0.00 less the total quarterly incentives paid during a contract extension.

For each day that the project has a 'D' rating the Contractor and/or his surety shall be liable for liquidated damages in the amount of $1,000 per day. Failure to upgrade the project to the minimum of a 'B' rating within 72 hours will result in the project being rated 'F'.

For each day that the project has an 'F' rating the Contractor and/or his surety shall be liable for liquidated damages in the amount of $1,500 per day.

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308.05 DESIGN CERTIFICATION

Insert: The following:

ENVIRONMENTAL INFORMATION

MDE # N/A

DESIGN CERTIFICATION

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, THE 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUMES I & II, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT EROSION AND SEDIMENT AND STORMWATER MANAGEMENT REGULATIONS."

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_____ _____
NAME SIGNATURE

_____ _____
MARYLAND REGISTRATION NUMBER DATE
P.E., R.L.S. OR R.L.A. (circle)

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO._____, EXPIRATION DATE:_____."

CATEGORY 500
PAVING

SECTION 504 — HOT MIX ASPHALT PAVEMENT

504.04 MEASUREMENT AND PAYMENT.

478 **DELETE:** 504.04.01 Price Adjustment for Asphalt Binder in its entirety.

INSERT: The following.

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 Asphalt Binder currently posted at www.marylandroads.com (Business with SHA/Contracts, Bid, and Proposals) prior to bid opening. Cost differentials between PG 64-22 and a binder specified shall be included in the price bid per ton for Hot Mix 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:

Percent Change = ((Pp – Pb)/ Pb) X 100

PA = T x Q x ((Pp – (D x Pb))

Where:

PA = Price Adjustment for the current month
T = Design target asphalt content expressed as a decimal
Q = Quantity of Hot Mix Asphalt placed for the current month
Pp = Index price for PG 64-22 Asphalt Binder per ton for the month of placement
D = 1.05 for increases over 5 percent; 0.95 for decreases over 5 percent
Pb = Prevailing base index price for PG 64-22 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.

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CATEGORY 500
PAVING

SECTION 504 — HOT MIX ASPHALT PAVEMENT

504.04 MEASUREMENT AND PAYMENT.

477 **DELETE**: 504.04.02 Payment Adjustments for Pavement Density and Hot Mix Asphalt Mixture in its entirety.

INSERT: The following.

504.04.02 Payment Adjustments for Pavement Density and Hot Mix Asphalt Mixture. Payment adjustments for pavement density will be based on individual sublot 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 mixture will be made by adjusting the payment for Hot Mix Asphalt. Incentive payments will be made using the Contract items for HMA Density Incentive and HMA Mix Design Incentive. The item amounts will be established by the Administration and shall not be revised by the Contractor. Payment reductions for density will be waived for portions of the pavement where the Engineer determines that inadequate density is due to a poor foundation.

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TABLE 504A		
Dense Graded HMA Mixes – Percent of Maximum Density		
Lot Average % Minimum	No Individual Sublot Below %*	Pay Factor
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
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

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Note 1: When any test data is above 97.0, the lot may be rejected per the Engineer. When not rejected, the lot will receive a pay adjustment in accordance with the following:

(a) When the density lot average is above 97.5, the pay factor = 0.750
(b) When 3 sublot densities are above 97.0, the pay factor = 0.950
(c) When 4 or more sublot densities are above 97.5, the pay factor = 0.750

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 sublot values and lot average value will be used in acceptance decision.

*Note 4: The average sublot values and the lot average will be used in acceptance decision.

Acceptance of a mixture lot will be in conformance with 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 as computed using the quality level analysis in conformance with MSMT 735.

Payment adjustments will be computed as follows:

Density Lot Payment Adjustment = (DF – 1) x (CP) x (TL)

Mix Design Lot Payment Adjustment = (MF – 1) x (CP) x (TL)

where:

DF = Density pay factor from Table 504A
MF = Mixture pay factor [0.55 + (0.5 x CMPWSL)]
Refer to MSMT 735 for CMPWSL.
CP = Contract unit price
TL = Applicable tonnage per lot

An in-place density lot containing material with a pay factor of less than 1.000 may be accepted at the reduced pay factor, provided the pay factor for density is at least 0.800 and there are no isolated defects.

A mixture 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.

An 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. Any lot that is rejected shall be replaced.

When less than five Quality Control or Quality Assurance samples per in-place density lot have been obtained, the lot will not be evaluated for incentive payment.

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.

FOR REVIEW PURPOSES ONLY

CATEGORY 500
PAVING

SECTION 535 — PAVEMENT SURFACE PROFILE

535.01 DESCRIPTION. This work shall consist of measuring the roughness of the final surface of Hot Mix Asphalt (HMA) or Portland Cement Concrete (PCC) pavements. The Contractor shall use an International Roughness Index (IRI) Inertial Profiler to collect Quality Control (QC) data. The IRI Inertial Profiler shall conform to E 950 and MSMT 563. The Administration will use an IRI Inertial Profiler to perform all Quality Assurance (QA) testing and acceptance. All traveled roadway surfaces shall be measured unless otherwise indicated in this Specification.

535.01.01 Existing Conditions. A definition of ride quality based on IRI, as defined by The Federal Highway Administration is given below:

IRI RANGE (in./mile)	RIDE QUALITY
< 60	Very Good
≥ 60 to < 95	Good
≥ 95 to ≤ 170	Fair
>170 to ≤ 220	Mediocre
> 220 to ≤ 640	Poor

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535.02 MATERIALS. Not applicable.

535.03 CONSTRUCTION.

535.03.01 Equipment Standardization Testing. Standardization testing shall be completed on Administration specified sites at regular intervals in conformance with MSMT 563. Additional standardization testing may be required for a device that is potentially out of conformance between regular standardization tests. Standardization shall be completed and a copy of the results shall be on file at the Administration's Office of Materials Technology (OMT). QC test data obtained with a profiler that has not completed standardization testing in conformance with MSMT 563 will not be accepted.

535.03.02 Quality Control Testing for Pavement Profile. The finished surface of all pavements shall be measured with a profiler by the Contractor in conformance with MSMT 563 and E 950. Pavement profiles shall be measured in both wheel paths simultaneously, parallel to the right edge of the lane, and in the direction of travel for each lane. The Contractor shall establish and document in the HMA Field Quality Control Plan (504.03) or the PCC Proposed Paving Plan (520.03) a regular schedule of pavement profiling to verify conformance with these Specifications. The Contractor shall notify the Engineer prior to performing any QC testing.

The Contractor's QC data shall be submitted to the Engineer, in accordance with the approved QC plan submitted to OMT, within 72 hours of completion of the paving operations.

Data Submittal. All submittals shall be sent to the Engineer, and to the Administration's OMT (in electronic format) via one of the following:

(a) E-mail: ridespec@sha.state.md.us

(b) Delivered: Office of Materials Technology
7450 Traffic Drive
Hanover, MD 21076
Attention: Paving Quality Assurance Team Leader

When any profile testing and data submission has not been completed within the specified times and in conformance with MSMT 563 for all sections on the project, the tested pavement will not be eligible for incentive payment as stated in 535.04.03(a). The Contractor's QC data will still be required for material clearance per Frequency Guide.

The QC IRI shall be determined using the Contractor's Inertial Profiler and shall be reported in sections equal to 25 ft in length and one lane in width. Tested sections shorter than 25 ft due to exempt areas or the project end shall be ignored. A full 25 ft section shall be started after each exempt area. Three runs shall be made as described in MSMT 563. The coefficient of variation of the overall average IRIs shall be less than or equal to 4 percent for three runs for the data to be accepted. When the first three runs do not meet the above criteria, additional runs shall be performed until three measured runs meet the criteria. All three runs shall be submitted to the Administration; however, only the median run (based on average IRI) will be considered from Contractor's QC data, and will be used to compute any pay adjustments.

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(a) Areas Not Profiled. The following pavement areas shall not be profiled, and not reported for pay adjustment:

(1) Shoulder areas.

(2) Parking areas of ride sharing facilities or park and ride lots.

(3) Pavements of ramps, side street tie-ins, acceleration lanes, or deceleration lanes less than 1000 ft in length.

(4) Bridge decks or railroad crossings and pavement within 50 ft thereof.

(5) Pavement within 50 ft of transverse joints that separate it from existing pavement. This does not apply when a transverse joint is paved on both sides as part of one contract.

(6) Pavements on projects with less than 1000 center lane feet (after elimination of areas not to be profiled under items 1, 2, 3, 4, and 5 above.)

Pavement Surface Checks shall be performed on areas listed above in conformance with Section 504.03.14.

(b) Defects. When any section IRI is greater than IRI_e (table in 535.04), the Contractor shall take one of the following corrective actions, as directed and approved by the Engineer, at no additional cost to the Administration:

(1) Remove and replace the pavement that exceeds IRI_e, or

(2) Grind the section to bring the section IRI into conformance with these Specifications, or

(3) Accept the Defect Cost (P_{defect}, in 535.04) for any defect section where corrective action is not performed.

Items 1, 2, or 3 above shall be applied to each defect section as directed by the Engineer. Any approval from the Engineer to waive items 1 or 2 shall not constitute a waiver of item 3 unless explicitly stated by the Engineer. The Contractor shall reprofile all affected pavement sections, including any additional transverse paving joints created, after any corrective work to determine if the sections are within Specification. The reprofiled data shall include the section prior to the corrected sections and the four sections after the corrected sections. The reprofiled data shall be used for final pay calculations; however, the minimum IRI value for any corrected section shall be limited to IRI_c (table in 535.04).

Defects not due to Contractor's Workmanship. When the Engineer determines that a defect is not the result of the Contractor's workmanship, the Engineer shall provide a written justification for removing the defect from final pay calculations to the Administration's OMT (Attention: Asphalt Technology Division). The Asphalt Technology Division will provide a concurrence/non-concurrence decision to the Engineer. In the case of concurrence, the defects found not due to the Contractor's workmanship shall not be included in final pay calculations. In the case of non-concurrence, the Engineer will discuss this matter with the Administration's OMT's Asphalt Technology Division before making the final determination of pay adjustment.

535.03.03 Paving Quality Assurance Testing for Pavement Profile (IRI). The Administration may test sections of the pavement to verify the Contractor's QC data. When the QA testing has not been performed within 14 calendar days from the date that the final, 100 percent QC data submittal is received by the Administration's OMT, only the QC data will be used for any pay adjustments on the project. The QA testing will follow the same procedures required in 535.03. The initial QA test will consist of one run on all 25 ft sections. The initial QA run and the median QC run will be compared to determine acceptance of QC data. The average IRI, the number of defects, and the number of tested sections will be compared as follows:

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STATISTIC	UNIT	QC DATA TOLERANCE WITH RESPECT TO QA DATA
Average IRI	in./mile	± (2 % + 2)
Number of Defects	Sections	± (10 % + 2)
Number of Tested Sections	Sections	± (1 % + 1)

When the Contractor's QC data falls within the above tolerances, the Contractor's QC data will be used for all pay adjustments. When the Contractor's QC data does not agree with the initial QA data as described above, and a cause cannot be identified, the Administration will profile a minimum of two additional QA runs. The three QA runs (one initial and two retests) will then be evaluated to determine if the coefficient of variation of the overall average IRIs is less than or equal to 4 percent for all three runs. When the three QA runs do not meet the above criteria, additional runs will be performed until three measured QA runs meet the criteria. The median run (based on average IRI) of the three QA runs will then be recompared with the Contractor's QC data in conformance with the above table.

When the QC and QA data are still not within the tolerances as described above for Average IRI or Number of Defects after three QA runs, both profilers shall be retested on a standardization test site to determine if either profiler no longer conforms to MSMT 563. When either profiler is out of standardization, the equipment shall be recalibrated or repaired as necessary to bring the device back into compliance with MSMT 563. When the Contractor's profiler is not restandardized and brought into compliance with MSMT 563 within three paving days, the Contractor shall cease the paving operation or use another standardized profiler for QC data collection. Once the Contractor's profiler complies with MSMT 563, the Contractor may retest sections for comparison with the Administration's data or accept the Administration's QA data as the basis for any pay adjustment on all sections. When the Administration's profiler is out of standardization, the Contractor's QC data for all sections will be accepted. When both profilers are found to be in noncompliance with MSMT 563, the profilers shall be repaired or recalibrated as necessary and all QC and QA testing since the previous QC/QA comparison shall be repeated.

When the QC and QA data for Number of Tested Sections are not within the tolerance as described above, the Contractor and the Administration shall recalibrate their respective Distance Measuring Instruments (DMI) and perform additional QC testing until the QC data meets the tolerance criteria for Number of Tested Sections.

535.04 MEASUREMENT AND PAYMENT. Pavement surface profile testing costs will be incidental to the HMA surface material or PCC material as specified in the Contract Documents. Payment will be full compensation for all set up, technicians, traffic control, any type of corrective work to bring the pavement into conformance with this Specification, and for all material, labor, equipment, tools, and incidentals necessary to complete the work. The pay adjustment numbers for the Overall IRI (535.04.01) and for Defects (535.04.02) shall be calculated first. The pay adjustment for pavement surface profile applied on the Contract shall be the Total Pay Adjustment in conformance with 535.04.03.

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535.04.01 Overall IRI. The overall average IRI for the project (IRI_{AVG}) will be calculated as the average IRI value of all tested 25 ft sections on the project. The pay adjustment for Overall IRI will then be calculated based on the factors shown below. This pay adjustment applies only to the pavement within the tested sections.

Incentive. $PF = P_{max}$, when IRI_{AVG} is less then or equal to IRI_a
$PF = P_{max} \times (IRI_b - IRI_{AVG})/(IRI_b - IRI_a)$, when IRI_{AVG} is greater than IRI_a and less than IRI_b

INCENTIVE = PF x NS x (25/5280 lane miles per section)
DISINCENTIVE = 0

Full Pay. When IRI_{AVG} is greater than or equal to IRI_b and less than or equal to IRI_c

INCENTIVE = 0
DISINCENTIVE = 0

Disincentive. $PF = P_{min} \times (IRI_{AVG} - IRI_c)/(IRI_d - IRI_c)$, when IRI_{AVG} is greater than IRI_c and less than IRI_d,
$PF = P_{min}$, when IRI_{AVG} is greater than or equal to IRI_d

INCENTIVE = 0
DISINCENTIVE = PF x NS x (25/5280 lane miles per section)

535.04.02 Defects. The IRI for each individual section on the project will be used to calculate any cost to be applied for defects on the project. The pay adjustment for defects will be calculated based on the factors shown below. This pay adjustment applies only to the pavement within the tested sections.

NS_{defect} = Number of sections with an IRI greater than or equal to IRI_e
DEFECT COST = $P_{defect} \times NS_{defect}$

Where:

	DESCRIPTION	VALUE	UNITS
P_{max}	Maximum Incentive for Overall IRI	+	Dollars per lane-mile
P_{min}	Maximum Disincentive for Overall IRI	+	Dollars per lane-mile
P_{defect}	Defect Cost	+	Dollars per section
PF	Pay Factor for Overall IRI	*	Dollars per lane-mile
INCENTIVE	Incentive for Overall IRI	*	Dollars
DISINCENTIVE	Disincentive for Overall IRI	*	Dollars
DEFECT COST	Cost for Defects	*	Dollars
IRI_a	IRI for Maximum Incentive	+	Inches per mile
IRI_b	Minimum IRI for Full Pay	+	Inches per mile
IRI_c	Maximum IRI for Full Pay	+	Inches per mile
IRI_d	IRI for Maximum Disincentive	+	Inches per mile

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IRI_e	IRI threshold for Defects	+	Inches per mile
IRI_{AVG}	Overall average IRI for the project	*	Inches per mile
NS	Number of tested 25 foot Sections	*	Sections
NS_{defect}	Number of 25 foot Defect Sections	*	Sections

* Value to be determined on the project.
\+ The ride specification limits for P_{max}, P_{min}, P_{defect}, IRI_a, IRI_b, IRI_c, IRI_d, and IRI_e will be determined by the Engineer in conformance with 535.04.04.

535.04.03 Total Pay Adjustment. A total pay adjustment (TPA) will be made based on the total of any incentive and disincentive for Overall IRI minus any Defects. TPA resulting in increased payment to the Contractor will be paid under the item Pavement Surface Profile Pay Adjustment. This item amount has been established by the Administration and shall not be revised by the Contractor. TPA resulting in decreased payment will be deducted from monies owed the Contractor. The TPA shall be subject to conditions (a) and (b) below.

Total Pay Adjustment = INCENTIVE - DISINCENTIVE - DEFECT COST

(a) Regardless of the measured profile of any test section, incentive payment will not be permitted for the project when the Contractor's QC data was not submitted on time in conformance with 535.03.02. All other sections of this Specification shall still apply.

Total Pay Adjustment = 0 - DISINCENTIVE - DEFECT COST

(b) The total value of Overall IRI disincentive and Defect Cost shall not be more than the Maximum Disincentive pay adjustment for all of the profiled 25 foot sections.

If DISINCENTIVE + DEFECT COST is greater than P_{min} x NS x (25/5280 lane miles per section)
then Total Pay Adjustment = - P_{min} x NS x (25/5280 lane miles per section)

535.04.04 Pay Limit Determination. The pay limits will be determined in conformance with Appendix A.

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APPENDIX A

Step 1. Determine Rating 1 Related to Overall Ride (a) **Rating 1_____**

CONDITION		RATING
Number of HMA Lifts	1	+ 2.5
	2 or more	+ 0.0
Wedge/Level on the project?		- 1.5
Grinding on the project?		- 1.5
Poor Condition (b)?		+ 1.5
Curb/Gutter (c)?		+ 2.0
Tight Radius (d)?		+ 1.0

CONDITION	RATING
Tie-ins (e)?	+ 0.5
Night Paving?	+ 0.5
PG 76-22 in cold weather (f)?	+ 0.5
Confined Work Zone?	+ 0.5
Manholes/Inlets (g)?	+ 0.5
Crack Sealing (h) without grinding?	+ 0.5
Extensive Patching (i)?	+ 0.5

Total the Ratings for all of the Conditions that apply

(a) Selection shall be made for the conditions when or where the majority of the surface tonnage is placed on the project.
(b) Poor condition is defined as average preconstruction existing IRI greater than 220 in./mile (refer to Office of Materials and Technology for values) or PCI < 40 (if available).
(c) Contractor is required to match preconstruction existing curb and gutter with less than 8 ft of shoulder for more than 40 percent of the center line miles on the project for undivided roadways, or for more than 40 percent of the directional miles on the project for divided roadways.
(d) Roadway horizontal curve has a center line radius less than 2000 ft for more than 30 percent of the center line miles on the project.
(e) An average of more than 10 driveways, entrances, and cross-streets per center line mile on the project for undivided roadways, or per directional mile on the project for divided roadways.
(f) HMA with a PG 76-22 binder being placed when ambient air temperatures are below 50 F.
(g) An average of more than five manholes, utility covers, and inlets per lane mile on the project.
(h) Preconstruction existing crack sealing in any part of the lane width for more than 30 percent of the lane miles on the project.
(i) More than 10 percent main line patching for single lift overlays without grinding or wedge/level.

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Step 2. Select Specification Limits for Overall Ride. **IRI_c_____**
IRI_d_____

RATING 1	IRI_c	IRI_d
1.0 or less	70	90
1.5 to 2.5	80	100
3.0 to 4.0	90	110
4.5 to 5.5	100	120
6.0 or greater	120	120

IRI values provided in in./mile

Step 3. Compare Overall Ride Specification Limits with Existing IRI.

A. Reconsider IRI_c and IRI_d determined in Step 2, when IRI_c falls outside of the noted percentages of existing IRI. Final selection of IRI_c and IRI_d shall be limited to the five pairs of IRI_c and IRI_d listed in the table in Step 2.

CHANCES TO IMPROVE RIDE (Grinding, Wedge/Level, & No. of HMA lifts)	PERCENT OF EXISTING IRI	
	for minimum IRI_c	for maximum IRI_c
1	70 %	90 %
2	50 %	80 %
3 or more	40 %	70 %

B. Incentive pay limit values are IRI_a = 40 and IRI_b = 60. When existing IRI is less than IRI_b, reduce IRI_a and IRI_b in 5 IRI increments until IRI_b is less than existing IRI.

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Step 4. Select Defect Threshold (IRI_e). **IRI_e _____**

Select IRI_e based on the predominant Functional Class of the roadway.

	IRI for FUNCTIONAL CLASS			
RATING 1*	Interstates & Freeways/Expressways	Rural Other Principal Arterials	Urban Other Principal Arterials, Minor Arterials and Collectors	Locals
1.0 or less	90	110	120	140
1.5 to 2.5	100	120	130	150
3.0 to 4.0	110	130	140	160
4.5 to 5.5	130	150	160	180
6.0 or greater	150	170	180	200

* If IRIc and IRId in Step 2 have been revised based on Step 3, RATING 1 should be determined based on the Revised IRIc and IRId.

Step 5. Select the appropriate pay level.

FUNCTIONAL CLASS	MAXIMUM INCENTIVE FOR OVERALL RIDE (P_{max} in dollars per lane mile)	MAXIMUM DISINCENTIVE FOR OVERALL RIDE (P_{min} in dollars per lane mile)	DEFECT COST (P_{defect} in dollars per section)
Interstates & Freeways/Expressways	7350	7350	350
Other Principal Arterials	6500	6500	310
Minor Arterials and Collectors	5800	5800	275
Locals	5300	5300	250

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.

FOR REVIEW PURPOSES ONLY

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 ft^2, 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 549.03.03(h). 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 549.03.03(e).

(h) Alignment. Refer to 549.03.03(f).

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(i) Layout Markings. Refer to 549.03.03(i).

553.03.05 Quality Control Test Strip. Refer to 549.03.04.

553.03.06 Responsibility. Refer to Section 549.

553.03.07 Observation Period. Refer to 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.

FOR REVIEW PURPOSES ONLY

CATEGORY 500 PAVING

SECTION 556 — PREFORMED THERMOPLASTIC PAVEMENT MARKINGS

556.01 DESCRIPTION. Furnish and install heat applied preformed thermoplastic pavement marking symbols, legends, and lines as specified in the Contract Documents or as directed by the Engineer.

556.02 MATERIALS.

Preformed Thermoplastic is a durable pavement marking material. All Preformed Thermoplastic Pavement Marking material shall be selected from the Qualified Products List.

Heat Applied Permanent Preformed Thermoplastic Pavement Marking Material	951.06

556.03 CONSTRUCTION.

556.03.01 Quality Assurance/Quality Control. Refer to 549.

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

Applying pavement markings over longitudinal joints is prohibited; they shall preferably be offset 2 in. from them.

Thermoplastic Pavement Marking shall conform to the following:

(a) Temperature. The markings shall be applied when the thermoplastic, ambient, and surface temperature, and relative humidity conform to the manufacturer's recommendations.

(b) 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.

(c) Primer. When specified by the manufacturer, a primer shall be used if thermoplastic is applied to Portland cement concrete.

(d) Retroreflectance. The minimum retroreflectance shall be 150 millicandelas/lux/square meter for yellow and 250 millicandelas/lux/square meter for white as determined in conformance with 549.03.

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

(a) Manufacturer's name.

(b) Description of item.

(c) Date of manufacture.

(d) Contractor's name.

(e) Purchase order number.

(f) Lot number.

(g) Color.

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

Preformed Thermoplastic Pavement Marking Legends (letters and numbers) and Symbols will be measured and paid for at the Contract unit price per square foot. The square foot pay quantity for Legends (letters and numbers) and Symbols will be as specified in the Administrations Standard Details

Preformed Thermoplastic Pavement Marking lines will be measured and paid for at the Contract unit price per linear foot for the color and width specified.

FOR REVIEW PURPOSES ONLY

CATEGORY 500
PAVING

SECTION 557 – SNOWPLOWABLE RAISED PAVEMENT MARKERS

557.01 DESCRIPTION. Furnish and install new Snowplowable Raised Pavement Markers (SRPM) and replacement components as specified in the Contract Documents or as directed by the Engineer.

557.02 MATERIALS.

Castings	Qualified Products List / 951.05
Pavement Marker Reflector Lenses	Qualified Products List / 951.05
Epoxy	951.05

Snowplowable Raised Pavement Markers are durable materials.

557.03 CONSTRUCTION.

Casting. Recycled iron castings are prohibited.

Placement. Snowplowable Raised Pavement Markers shall be installed and located as specified in the Contract Documents and in conformance with the Maryland Manual of Uniform Traffic Control Devices (MdMUTCD).

General Installation Requirements.

(a) The Contractor shall install the SRPM no later than two weeks after the completion of the final surface or as directed by the Engineer.

(b) At the time of installation, the road surface and ambient temperature shall be as specified in the manufacturers' recommendations. Installing markers on wet pavement surfaces as determined in MSMT 729 is prohibited.

(c) At the time of installation, the Contractor shall have on the jobsite all the materials necessary to complete the installation.

(d) The quality control test strip containing a minimum of 10 groove cuts spaced as specified in the Contract Document shall be constructed to verify the accuracy and ability of the equipment and personnel. The contractor shall replace at no additional cost to the Administration any incorrect groove cuts and any incorrect casting placements within the test strip.

(e) At the time of installation, SRPM castings delivered with Pavement Marker Reflector Lens affixed should be free of dirt, dust, oil, grease, rust, moisture, or any foreign matter that will impair adhesion to the pavement. Any residual material that inhibits retroreflectivity of the reflector lens shall be removed without damage to the lens surface. It shall be the contractor's responsibility to clean each contaminated casting by sand blasting, wire brushing or other procedure approved by the Engineer to remove all foreign matter prior to installation. The use of chemicals to remove rust from the castings is prohibited.

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(f) The contractor shall replace at no additional cost to the Administration any incorrect groove cut and any incorrect casting placement. An additional test strip may be required by the Engineer in the event of incorrect installations. Incorrect installations, as determined by the Engineer, shall be corrected and repaired by the contractor at no additional cost to the Administration.

Pavement Marker Reflector Lens. Reflector lenses for pavement markers shall be the same color as the adjacent pavement marking except the back side shall be as follows;

(a) One-Way Applications: The backside for One-Way Markers shall be red or blank as specified in the Contract Documents or as directed by the Engineer.

(b) Two-Way Applications: The backside for Two-Way Markers shall be the same color as the adjacent pavement marking.

The pavement marker reflector lens shall be imprinted with the model/batch number and the manufacturers' name.

Castings. The casting shall be imprinted with the model number and the manufacturer's name.

New Installation.

(a) The SRPM shall be installed in accordance with manufacturer's recommendations and D 4383. The installed height shall not exceed 0.25 in. above the road surface. The surface of the keel and web shall be free of scale, dirt, oil, grease or any other contaminant which may reduce its bond to the epoxy adhesive. All requirements of the manufacturer's installation instructions shall be met.

(b) The groove cut for the casting shall be the appropriate dimensions to allow 0.125 in. movement side to side of the casting. All leveling lugs on the casting must contact the pavement. The leading and trailing edges of the casting must lie below the pavement surface and the casting properly seated. All other requirements of the manufacturer's installation instructions shall be met.

(c) Lenses used shall be of a type specifically manufactured and approved for use as SRPM reflector lenses. Lenses that are manufactured exclusively for recessed pavement markers are not permitted as substitutes for SRPM reflector lenses.

Replacement.

(a) Casting Replacement. The re-use of damaged or removed castings is prohibited.

(b) Pavement Marker Reflector Lens Replacement. The Contractor shall remove and dispose of any damaged reflector lens and replace with a new lens. Previously installed undamaged castings which are missing a reflector lens shall have a new reflector lens installed. The replacement lenses shall be installed per manufacturer's written instructions.

(c) Casting Groove Cut Replacement and Accuracy. The re-use of existing groove cuts is prohibited; castings shall only be installed in new groove cuts. Previously used groove cuts shall be permanently patched in accordance with applicable sections of 504, 505 and 522 or

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as directed by the Engineer. The location of the replacement groove cut shall be within 10 percent longitudinally in front (with the direction of traffic) and no lateral deviation exceeding 1½ in.

Casting Adhesive. The epoxy adhesive used to fasten the castings to the pavement surface shall conform to D 4383-05 Table X1.1.

Reflector Lens Adhesive in Casting. The adhesive used to fasten the reflector lens to the casting shall meet the manufacturers' recommendations.

Quality Assurance/Quality Control. Section 549.

Observation Period. The Contractor shall replace at no additional cost to the Administration, any SRPM or Pavement Marker Reflector Lenses found to be damaged, non-retroreflective or missing due to improper installation or manufacturing defects within 180 days after opening to traffic.

557.04 MEASUREMENT AND PAYMENT. The payment will be full compensation for all pavement preparation, furnishing and placement of SRPM's, testing, removal, groove cutting, repair and all materials, labor, equipment, tools and all incidentals necessary to complete the work.

(a) Snowplowable Raised Pavement Markers will be paid for at the Contract unit price per each. Furnishing and installing SRPM includes the casting, reflector, adhesive and grooving.

(b) Removal of existing Castings, excluding any incorrect installation by the Contractor, and repair of Groove Cuts will be paid for at the Contract unit price per each.

(c) Replacement of Pavement Marker Reflector Lenses will be paid for at the Contract unit price per each.

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CATEGORY 500
PAVING

SECTION 559 — PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS

559.01 DESCRIPTION. Furnish and apply permanent preformed patterned reflective pavement (PPPRP) markings as specified in the Contract Documents or as directed by the Engineer.

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.

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559.03.02 Quality Assurance/Quality Control. Refer to 549.03.01.

559.03.03 Cleaning Pavement Surfaces. Refer to 549.03.02.

553.03.04 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.

(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 549.03.03(h) 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	

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(f) Width. Refer to 549.03.03(e).

(g) Alignment. Refer to 549.03.03(f).

(h) Layout Markings. Refer to 549.03.03(i).

559.03.05 Quality Control Test Strip. Refer to 549.03.04.

559.03.06 Responsibility. Refer to 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/m^2 for white or 220 mcd/L/m^2 for yellow.

(c) Marking is discolored on a visual comparison with the color chips.

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.

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SECTION 875-UTILITIES STATEMENT

DESCRIPTION. The Contractor's attention is directed to the requirements of GP-5 and GP-7 of the Administration's current Standard Specifications for Construction and Materials.

MATERIALS. Not Applicable.

CONSTRUCTION. The Contractor shall cooperate to the fullest possible extent in such work.

The Contractor shall not begin or make any excavation without first notifying each and every public service company which may have underground facilities in the area of the proposed work area at least 48 hours prior to the commencement of said work.

The Contractor can notify the public service companies of work intentions by calling MISS UTILITY at 1-800-257-7777.

The Contractor can notify the following applicable Administration Offices of work intentions around:
TRAFFIC DEVICES:
ITS Operations Team – 410-787-7662
Signal Operations Team – 410-787-7650

CHART DEVICES:
Communication Division – 410-747-8590

The District Utility Contact numbers are:
District 1 – 410-677-4082
District 2 – 410-810-3274
District 3 – 301-513-7310
District 4 – 410-321-2841
District 5 – 410-841-1039
District 6 – 301-729-8439
District 7 – 301-624-8105

MEASUREMENT AND PAYMENT. No measurement or direct payment will be made to the Contractor for working around, protecting, or removing temporary material from the adjusted utilities. All costs incurred thereby shall be included in and considered incidental to the several pay items set up in the Proposal.

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CATEGORY 900
MATERIALS

665 **DELETE:** **SECTION 902 — PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS** in its entirety.

INSERT: The following.

SECTION 902 — PORTLAND CEMENT CONCRETE AND RELATED PRODUCTS

902.01 STORAGE. Storage of materials shall conform to the Contract Documents and as directed by the Engineer.

902.02 CERTIFICATION OF PORTLAND CEMENT AND BLENDED HYDRAULIC CEMENT. The manufacturer shall furnish certification as specified in TC-1.02. The certification shall also include:

(a) The mill shall report its quality control procedures, and submit a new report whenever there is a procedural change.

(b) The mill's control laboratory shall be inspected by the Cement and Concrete Reference Laboratory of the National Institute of Standards and Technology on their regularly scheduled visits. The Engineer shall be provided with copies of the reports of these inspections along with an account of the action taken to correct cited deficiencies.

(c) Records of data accumulated by the quality control procedures shall be produced upon request.

(d) A certified document shall accompany each shipment stating that the contents conform to all applicable requirements. Additionally, the document shall show the producer's name, mill location, carrier number, date loaded, weight contained in carrier, silo number, consignee, destination, Contract number, and type of cement. The signature and title of the signer shall be shown on the document.

(e) The mill shall, upon request, supply certified chemical and physical test values that can be associated with any sample representing cement drawn from a particular silo on a given date.

(f) Acceptance of cement by certification will be terminated if test results differ from mill results by more than the precision limits given in the test method. The acceptance procedure will then revert to storage testing and approval prior to shipment.

902.03 HYDRAULIC CEMENT.

902.03.01 Portland Cement. M 85, with the fineness and the time of setting determined using T 153 and T 131, respectively.

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902.03.02 Ground Iron Blast Furnace Slag. M 302, Grade 100 or 120. The Contractor may request to substitute a maximum of 50 percent of the weight of cement with ground iron blast furnace slag. When ground iron blast furnace slag is used, the minimum cement factor and water/cement ratio will be determined on the basis of the combined weight of the portland cement and ground iron blast furnace slag. When ground iron blast furnace slag is used to control alkali silica reactivity, see Table 902 B for percentage.

902.04 BLENDED HYDRAULIC CEMENT. M 240, Type I (PM) or a Type IP containing 15 to 25 percent pozzolan by weight of cement. Maximum loss on ignition is 3.0 percent. Do not use ground iron blast furnace slag for blending. The requirement for a manufacturer's written statement of the chemical composition is waived.

902.05 MASONRY CEMENT. C 91, except the water retention and staining tests are waived.

902.06 CONCRETE ADMIXTURES. Do not use concrete admixtures that contribute more than 200 ppm of chlorides based on the cement content when tested per MSMT 610. Use only prequalified admixtures.

Do not use pozzolan and Type I (PM) or Type IP cement in the same mix. Since the strength gains are delayed with these materials, a longer period of time may be required for curing and form removal.

902.06.01 Air Entraining Admixtures. M 154.

902.06.02 Chemical Admixtures. M 194, Type A, D, or nonchloride C.

902.06.03 High Range Water Reducing Admixtures. M 194, except that it shall be a liquid, the water content shall be a maximum of 85 percent of that of the control, and the durability factor shall be a minimum of 90. Use Type F for early strength, which shall produce a minimum compressive strength in 12 hours of 180 percent of that of the control. Use Type G when early strength is not specified. The manufacturer shall furnish certification as specified in TC-1.02. The certification shall include curves indicating the fluid ounces of admixture per 100 lb of cement as related to water reduction and strength gain for 12 hours when used with a minimum cement factor of 700 lb.

902.06.04 Pozzolans. The use of pozzolans may be requested to control alkali silica reactivity or for other reasons. When a pozzolan is used, determine the minimum cement factor and water/cement ratio on the basis of the combined weight cement and pozzolan. See Table 902 B for percentage of fly ash, and microsilica.

(a) Fly Ash. M 295, pozzolan Class C or F, except that the maximum permissible moisture content shall be 1.0 percent, and when used in concrete Mix Nos. 3 and 6 the maximum loss on ignition 3.0 percent.

(b) Microsilica. C 1240, except that the oversize requirement is waived.

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902.06.05 Corrosion Inhibitors. Corrosion inhibitors shall be calcium nitrite based and contain a minimum of 30 percent active ingredients by mass. The gallonage of corrosion inhibitor used in the concrete mixture shall be included as water when determining the water/cementitious materials ratio.

902.07 PORTLAND CEMENT CONCRETE CURING MATERIALS. Use burlap cloth, sheet materials, liquid membrane forming compounds, or cotton mats.

902.07.01 Burlap. M 182, Class 1, 2, or 3.

902.07.02 Sheet Materials. M 171 with the following exceptions:

(a) White Opaque Burlap Polyethylene Sheeting. Tensile strength and elongation requirements are waived. Use sheeting having a finished product weight of not less than 10 oz/yd^2.

(b) White Opaque Polyethylene Backed Nonwoven Fabric. 902.07.02(a), with the thickness requirement waived. Use material having a finished product weight of not less than 5 oz/yd^2.

(c) White Opaque Polyethylene Film. Tensile strength and elongation requirements are waived.

902.07.03 Liquid Membrane. M 148. Field control testing of the white pigmented curing compounds is on the basis of weight per gallon. The samples shall not deviate more than ± 0.3 lb/gal from the original source sample.

902.07.04 Cotton Mats. Cotton mats consist of a filling material of cotton bats or bats covered with unsized cloth and tufted or stitched to maintain the shape and stability of the unit under job conditions of handling.

Use coverings of either cotton cloth, burlap or jute having the following properties:

(a) Cotton cloth covering shall weigh not less than 6.0 oz/yd^2 and have an average of not less than 32 threads/in. of warp and not less than 28 threads/in. of filling. Use raw cotton, cotton comber waste, cotton card strip waste, or combinations thereof as the raw material used in the manufacture of the cotton cloth.

(b) Burlap or jute covering for cotton mats shall weigh not less than 6.4 oz/yd^2 and shall have not less than of 8 threads/in. of warp and not less than 8 threads/in. of filling. Use the grade known commercially as "firsts" and they shall be free from avoidable imperfections in manufacture and from defects or blemishes affecting the serviceability.

Use a cotton bat, or bats made of raw cotton, cotton waste, cotton linters, or combinations thereof, as the filling material for the mats. Mats shall weigh not less than 12 oz/yd^2.

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902.08 FORM RELEASE COMPOUNDS. Use form release compounds that effectively prevent the bond of the concrete to the forms. Form release compounds shall not cause discoloration of the concrete or adversely affect the quality or rate of hardening at the interface of the forms.

The flash point of the form release compound shall not be less than 100 F when tested per T 73.

902.09 PARAFFIN WAX. Use clear paraffin wax for use as a bond breaker for concrete. The flash point shall not be less than 380 F when tested under D 92.

902.10 PORTLAND CEMENT CONCRETE. Section 915 and as specified herein.

902.10.01 Proportioning. Prior to the start of construction, submit to the AME the source and proportions of materials to be used for each concrete mix. The mixture shall meet 902.10.03.

The concrete, with the exception of water and chemical admixtures, shall be proportioned by weight. Water and chemical admixtures may be proportioned by volume or weight. The mix shall be uniform and workable.

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902.10.02 Materials.

Coarse Aggregate	901.01
Fine Aggregate	901.01
Cement	902.03 and 902.04
Concrete Admixtures	902.06
Synthetic Fibers	902.15
Water	921.01

902.10.03 Portland Cement Concrete Mixtures.

The concrete mixes shall conform to the following:

TABLE 902 A

PORTLAND CEMENT CONCRETE MIXTURES									
MIX NO.	28 DAY SPECIFIED COMPRESSIVE STRENGTH psi	STANDARD DEVIATION psi	CRITICAL VALUE psi	MIN CEMENT FACTOR lb/yd^3	COARSE AGGREGATE SIZE M 43 / M 195	MAX WATER/ CEMENT RATIO by wt	SLUMP RANGE in.	TOTAL AIR CONTENT %	CONCRETE TEMPERATURE F
1	2500	375	2430	455	57, 67	0.55	2 — 5	5 — 8	70 ± 20
2	3000	450	3010	530	57, 67	0.50	2 — 5	5 — 8	70 ± 20
3	3500	525	3600	580	57, 67	0.50	2 — 5	5 — 8	70 ± 20
4	3500	525	3600	615	57, 67	0.55	4 — 8	N/A	70 ± 20
5	3500	525	3600	580	7	0.50	2 — 5	5 — 8	70 ± 20
6	4500	675	4770	615	57, 67	0.45	2 — 5	5 — 8	65 ± 15
7	4200	630	4420	580	57	0.50	1½ — 3	5 — 8	70 ± 20
8	4000	600	4180	750	7	0.42	2 — 5	5 — 8	65 ± 15
9	3000 (a)	N/A	N/A	800	57, 67	0.45	4 — 8	5 — 8	70 ± 20
10	4500	675	4770	700	¾" – No. 4	0.45	2 — 5	6 — 9	65 ± 15
11	4200	630	4420	—	57, 67	0.45	2 — 5	5 — 8	65 ± 15
12	4200	630	4420	—	¾" – No. 4	0.45	2 — 5	6 — 9	65 ± 15

Note 1: When concrete is exposed to water exceeding 15,000 ppm sodium chloride content, Type II cement shall be used. In lieu ofType II cement, a Type I cement may be used in combined form with an amount of up to 50 percent replacement with ground iron blast furnace slag or an amount of up to 25 percent replacement with Class F fly ash. The Contractor shall submit to the Engineer the proposed mix proportions and satisfactory test results per C 1012 showing a sulfate resistance expansion not exceeding 0.10 percent at 180 days

Note 2: The temperature of Mix Nos. when used for other than superstructure work as defined in TC-1.02 shall be 70 ± 20 F.

Note 3: Type A or D admixture shall be added to bridge, box culvert, and retaining wall concrete.

Note 4: Nonchloride Type C admixtures may be used when approved by the Engineer.

Note 5: Other Slump Requirements:
When a high range water reducing admixture Type F or Type G is specified, the slump shall be 4 to 8 in.
When synthetic fibers are specified, the slump shall be 5 in. maximum.
When concrete is to be placed by the slip form method, the slump shall be 2-1/2 in. maximum.
When the absorption of the coarse aggregate is greater than 10 percent, the slump shall be 3 in. maximum.

Note 6: Mix 9 shall contain a Type F high range water reducing admixture.

Note 7: Mix 10 and 12 shall be proportioned as specified in 211.2 of the ACI's Recommended Practices for Selection Proportions for. Structural Lightweight Concrete. The maximum average Density of Cured Concrete shall be 118 lb/ft^3. Control testing for Density of Cured Concrete shall be two companion cylinders for each 100 yd^3, or fraction thereof, as specified in M 195.

Note 8: Mix 11 and 12 shall also conform to all requirements as specified in Table 902 C.

(a) Acceptance will be based on a minimum compressive strength of 3000 psi in 24 hours. Design approval will be given based on trial batch obtaining a minimum compressive strength of 2500 psi in 12 hours. Testing shall conform to 902.10.08 except that cylinders shall remain in the molds until tests are conducted.

Coarse and fine aggregate having an expansion up to 0.10 percent when tested for alkali silica reactivity (ASR) MSMT 212 may be used without restriction. Aggregates having an expansion greater than 0.10 but less than 0.35 percent are considered reactive and may only be used when one of the options in table 902 B are employed. Those having an expansion of 0.35 percent and greater are prohibited.

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TABLE 902 B

OPTION	ALKALI CONTENT OF CEMENT % max	REPLACE CEMENT WITH		SPECIFICATION
		MATERIAL	% BY WEIGHT	
1	1.50	Class F Fly Ash	15 – 25	M 295
2	1.50	Ground Iron Blast Furnace Slag	25 – 50	M 302 Grade 100 or 120
3	1.50	Microsilica	5 – 7	C 1240
4	—	Blended Cement (a)	100	M 240
5	0.60 (b)	Low Alkali Cement	100	M 85

(a) Pozzolan content of 15 – 25 percent by weight of cement
(b) For mix 9 used for Portland cement concrete pavement repairs; the maximum allowable percentage of alkalies in Portland cement shall be 0.70.

When reactive aggregate is used, designate which option will be used to control the formation of the ASR gel. If an option other than option 5 in Table 902 B above is chosen, conduct tests per MSMT 212 using the reactive aggregate and the proposed cementitious material. The expansion test results shall not be greater than 0.10 percent. When more than one reactive aggregate is used in a concrete mix, each shall be tested individually and the maximum amount of pozzolan required to reduce the expansion of all the aggregates to 0.10 percent or less shall be used. Submit the aggregate source, test results, and the percent and type of replacement cement to the Engineer. The Engineer may withhold source approval pending verification testing.

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TABLE 902 C

MIX PHYSICAL PROPERTIES		
TEST PROPERTY	**TEST METHOD**	**SPECIFICATION LIMITS**
Minimum Cementitious Materials Factor, lb/yd^3	—	580
Maximum Content of Portland Cement, lb/yd^3	—	550
Water/Cementitious Materials Ratio by Wt.	—	0.45
Corrosion Inhibitor, gal/yd^3	902.06.05	2.0
Synthetic Fibers, lb/yd^3	902.15	1.5
Permeability of Field Concrete, moving average of three tests, coulombs max	T 277 Modified	2500
Permeability of Field Concrete, individual test, coulombs max	T 277 Modified	3000
Shrinkage at 28 days, microstrains	C 157	400

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Note 1: Only Type I or II Portland cement shall be used.

Note 2: Mixes shall contain ground iron blast furnace slag, fly ash or microsilica.

Note 3: The water to cement ratio shall be based upon the total water to cementitious materials ratio. The gallonage of the corrosion inhibitor shall be included in the water/cementitious materials ratio.

Note 4: The permeability test value of field concrete shall be the average of two test specimens representing production concrete. Test specimens shall be molded on the project site in 4 x 8 in. molds conforming to M 205. Test specimens shall be handled under same conditions as compressive strength test specimens in conformance with C 31 for the first seven days. When seven days old, they shall be cured in a 100 F water bath for the remainder of the 28 day curing. The 28 day rapid chloride permeability of the specimens will be determined in conformance with T 277. Test for the geometry of test specimens will be waived.

Note 5: Shrinkage tests will be performed on trial mixes only.

Note 6: High range water reducing admixture may be used except the water reducing requirements will be waived.

Note 7: A sealer conforming to 902.12 shall be used on the finished surface.

902.10.04 Trial Batch. A trial batch shall be prepared to certify that each mix meets 902.10.05 and 902.10.06. Approval will be given when the test results meets the minimum required average strength.

Make arrangements with the AME at least two weeks in advance, to have an authorized representative present during the batching and testing. Each trial batch shall consist of at least 3 yd^3 of concrete. Supply all equipment, and labor required to produce the trial batches and conduct the required tests at no additional cost to the Administration.

The AME may waive the requirement for a trial batch when past performance records show that the required average strength requirement has been met.

902.10.05 Design Required Average Strength.

Specified compressive strength, f_c', psi	Required average compressive strength, f_{cr}', psi
$f_c' \leq 5000$	Use the larger value computed from Eq. (A-1) and (A-2) $f_{cr}' = f_c' + 1.34s$ (A-1) $f_{cr}' = f_c' + 2.33s - 500$ (A-2)
Over 5000	Use the larger value computed from Eq. (A-1) and (A-3) $f_{cr}' = f_c' + 1.34s$ (A-1) $f_{cr}' = 0.90 f_c' + 2.33s$ (A-3)

where:

f_c' = the 28 day specified compressive strength.
s = the standard deviation as specified in 902.10.06.

A test is defined as the average strength of two companion cylinders.

902.10.06 Standard Deviation.

(a) When past performance records are available, a standard deviation will be established from documented performance records of the producer consisting of a minimum of 15 consecutive 28 day compressive strength tests obtained within the last 12 months.

The standard deviation will be established as the product of the calculated standard deviation and multiplier.

NUMBER OF TESTS	MULTIPLIER FOR STANDARD DEVIATION
15	1.16
20	1.08
25	1.03
30 or more	1.00

Interpolate for intermediate number of tests.

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(b) When past performance records are not available, the required average strength shall meet to the following:

Specified compressive strength, f_c', psi	Required average compressive strength, f_{cr}', psi
$f_c' < 3000$	$f_{cr}' = f_c' + 1000$
$3000 \leq f_c' \leq 5000$	$f_{cr}' = f_c' + 1200$
$f_c' > 5000$	$f_{cr}' = 1.10\, f_c' + 700$

902.10.07 Standard of Control. The average of all sets of three consecutive strength tests shall equal or exceed the critical value as specified in 902.10.03 which shall be computed using the following formula:

Critical Value = $fc' + (1.14 \text{ X } S) - 500$

Failure to conform to this criteria shall be cause for immediate investigation and remedial action up to and including suspension of production. A design standard deviation equal to 15 percent of the specified strength shall be used for calculation until a minimum of 15 test results are obtained.

The actual average strength and standard deviation shall be computed upon the availability of 28 day strength data comprising a minimum of 15 tests. Should this determination indicate an excessive margin of safety, the concrete mix may be modified to produce lower average strength as approved by the Engineer. If these calculations indicate a coefficient of variation greater than 15, the quality of the concrete and testing will be evaluated.

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902.10.08 Testing. Sampling per T 141. Testing as follows:

TEST	METHOD	MINIMUM TEST FREQUENCY	RESPONSIBILITY
Temperature (e)	T 309	1 per 50 yd^3 (or fraction thereof)	Project Engineer
Slump (a)(e)	T 119	1 per 50 yd^3 (or fraction thereof)	Project Engineer
Air Content (a)(e)	T 152 T 196	1 per 50 yd^3 (or fraction thereof)	Project Engineer
Compression (b)(c)(d)	T 23	1 per 50 yd^3 (or fraction thereof)	Project Engineer
Compression (b)(c)(d) Mix No. 7 Only	T 23	3 per Day	Project Engineer

(a) A second test will be made when the first slump or air content test fails. Acceptance or rejection will be based on the results of the second test.
(b) Compressive strength tests are defined as the average of two companion cylinders.
(c) The Contractor shall be responsible for the making of all early break cylinders and furnishing the molds, stripping, curing/delivery of all cylinders, including 28 day cylinders, to the testing laboratory.
(d) The Project Engineer will be responsible for making, numbering and signing the 28 day cylinders.
(e) When constructing plain and reinforced concrete pavements, the testing frequency for slump, air content, and temperature shall be 1 per 100 yd^3 or fraction thereof.

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902.10.09 Acceptance. Concrete will be acceptable if both of the following requirements are met:

(a) The average of all sets of three consecutive strength tests equal or exceed the specified design strength.

(b) No individual strength test (average of two companion cylinders) falls below the specified design strength by more than 500 psi.

902.10.10 Price Adjustment. A price adjustment will be based on the Contract unit price per cubic yard of concrete. If the unit is a lump sum item, the price per cubic yard for the concrete will be determined by dividing the cubic yards into the Contract lump sum price.

(a) Test Results More Than 500 psi Below the Specified Design Strength. Failing strength tests will be considered individually with a price adjustment being applied on the percentage basis as shown below.

(Price per yd^3) X (quantity of yd^3 represented by the failing concrete strength) X (percent of failure).

Example:

$400.00 per yd^3 X 50 yd^3 X [1-(3600/ 4500 psi)] = $4,000.00

No payment will be allowed when the test results fall below 50 percent of the specified design strength for structural concrete or 40 percent for incidental concrete.

The Engineer will determine when the strength of the concrete represented by the failing tests is sufficient to remain in place or whether it must be removed and replaced with Specification concrete.

(a) Test Results 500 psi or Less than the Specified Design Strength. Strength failures 500 psi or less than the specified design strength will be averaged with the next two consecutive tests. If those two tests include a failure greater than 500 psi, those tests will be evaluated as in 902.10.10(a) and replaced with the next consecutive test. If the resulting average falls below the specified design strength, a price adjustment will be applied as specified in the table below. Any failure will only be included in one grouping.

STRENGTH BELOW THE SPECIFIED (avg of 3 tests) DESIGN LEVEL, psi	**ADJUSTMENT FACTOR**
MIX NO. 1 THRU MIX NO. 7	
1 – 100	0.005
101 – 200	0.01
201 – 300	0.02
301 – 400	0.04
401 – 500	0.08

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Adjustment price equals (price per yd^3) X (quantity of yd^3 represented by the failing cylinders) X (the adjustment factor).

Example:

$400.00 per yd^3 X 50 yd^3 X 0.01 = $200.00

902.11 MORTAR FOR GROUT. Mortar used for grouting anchor bolts, pipe, handrail posts, and miscellaneous items shall be composed in accordance with one of the following:

(a) One part Portland cement or blended hydraulic cement and one part mortar sand by dry loose volume.

(b) Prepared bag mixes consisting of Portland cement or blended hydraulic cement and mortar sand. The prepared mixes shall produce a mortar meeting the strength requirements specified in the Contract Documents.

(c) Use nonshrink grout when specified. The grout shall have a minimum compressive strength of 5000 psi in seven days when tested as specified per T 106, except that the cube molds shall remain intact with a top firmly attached throughout the curing period. The nonshrink grout shall have a minimum expansion of 0.0 percent after seven days when tested as specified per T 160.

(d) Epoxy grout shall consist of sand and epoxy mixed by volume in per the manufacturer's recommendations. The grout shall be capable of developing a minimum compressive strength of 6500 psi in 72 hours when tested per MSMT 501. Sand for epoxy grout as specified in 901.01.

(e) An epoxy or polyester anchoring system may be used when approved by the Engineer in accordance with the manufacturer's recommendations. Strength values shall be as specified in the Contract Documents.

902.12 LINSEED OIL. Shall consist of a 50-50 mixture (by volume) of boiled linseed oil meeting Federal Specification TT-L-190 and kerosene per D 3699.

902.13 LATEX MODIFIED CONCRETE. Portland cement concrete containing prequalified Laboratory approved styrene butadiene latex emulsion is defined as Latex Modified Concrete (LMC).

Latex emulsion shall have a minimum of 90 percent of the nonvolatiles as styrene butadiene polymers. The latex emulsion as specified in Table 902.13 A. The material shall be stored in suitable containers and be protected from freezing and exposure to temperatures in excess of 85 F.

LMC shall be proportioned using volumetric mixing and designed as follows:

LATEX MODIFIED CONCRETE	
MATERIAL	**SPECIFICATION LIMITS**
Portland Cement, CWT/yd^3, min	6.6
Latex Emulsion/Cement Ratio	0.31 – 0.34
Water/Cement Ratio, max	0.22
Entrained Air, %	6.0 ± 3
Slump, in.	5 ± 1

The physical properties of LMC shall conform to Table 902.13 B. The Contractor shall furnish the necessary 3 X 6 in. molds per M 205 to be used for the fabrication of compressive strength cylinders.

Control and Acceptance Sampling.

(a) Submit a two qt minimum sample, of the styrene butadiene latex emulsion to the AME daily for each lot of material used in a day's production.

(b) A batch for LMC is defined as the capacity of the equipment being used on the project. Slump and air samples will be taken and tested before the placement of a batch is permitted. The slump shall be measured four to five minutes after discharge from the mixer. The test material shall be deposited off the deck and not be disturbed during this

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waiting period. One additional sample for slump and air will be taken randomly during the placement of each batch. For seven day compressive strength, two tests each per batch are required. A test is defined as consisting of two companion cylinders. The samples for these tests will be taken at random while the placement is in progress.

TABLE 902.13 A

REQUIREMENTS FOR CHEMICAL PROPERTIES OF LATEX EMULSION MATERIALS

PROPERTY	SPECIFICATIONS		QUALITY ASSURANCE TESTS	
	LIMITS	TOLERANCE	PREQUALIFICATION TESTS	CONTROL AND ACCEPTANCE
Color	White	—	X	X
pH	9.0 – 11.0	—	X	X
Weight, lb/gal	8.40 – 8.47	—	X	X
Solids Content, %	46 – 53	—	X	X
*Butadiene Content, % of polymer	30 – 40	—	—	—
Viscosity @ 10 rpm-cps	Match Original	± 20	X	X
*Surface Tension, dynes/cm max	50	—	—	—
*Mean Particle Size, polymer – Å	1400 – 2500	—	—	—
Coagulum, % max	0.10	—	X	X
*Freeze-Thaw Stability, coagulum, % max	0.10	—	X	X
Infrared Spectra of Latex Film	Match Original	—	X	X
Infrared of Alcohol, Soluble Portion of Latex	Match Original	—	X	X
Shelf Life, min	1 yr	—	X	—

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Note 1: Quality assurance tests shall be conducted as specified in MSMT 612 except those denoted by an * shall be conducted as specified in FHWA RD – 78-35.

Note 2: The original or prequalification sample shall be accompanied by the producer's certification on all of the tests and properties noted above and as specified in TC-1.02. The certification shall contain actual test values of the product and the infrared spectrograph.

Note 3: A separate certification is required for each lot of material. The certification shall note the date of manufacture, lot size, and whether or not the material is identical to the formulation of the original sample.

TABLE 902.13 B

LATEX MODIFIED CONCRETE PHYSICAL PROPERTIES			
TEST PROPERTY	**TEST VALUES**	**QUALITY ASSURANCE TESTS**	
		PREQUALIFIED TESTS	**CONTROL AND ACCEPTANCE**
7 Day Compressive Strength, psi min	3000	X	X
28 Day Compressive Strength, psi min	3500	X	—
42 Day Compressive Strength, psi min	3500	X	—
7 Day Flexural Strength, psi min	550	X	—
28 Day Flexural Strength, psi min	650	X	—
42 Day Shear Bond Strength, psi min	2000	X	—
Durability Factor, 300 cycles, % min	85	X	—
Chloride Permeability, Ppm max	1000	X	—
Scaling Resistance, 50 cycles, max	3	X	—

Note 1: Quality assurance tests shall be conducted as specified in MSMT 721.

Note 2: Seven Day Compressive Strength Test will be used for Control & Acceptance of the material. The minimum specified design strength is 3000 psi at seven days. The mix design approval and acceptance will be based on a coefficient of variation of 10 percent with a probability of 1 in 10 tests falling below the specified strength. Only test values 80% or greater than the specified strength will be accepted

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902.14 RAPID HARDENING CEMENTITIOUS MATERIALS FOR CONCRETE PAVEMENT REPAIRS. Materials shall be a dry, packaged cementitious mortar having less than 5 percent by weight of aggregate retained on the 3/8 in. sieve and meet the following requirements:

Classification.

Class I — For use at ambient temperatures below 50 F.
Class II — For use at ambient temperatures of 50 to 90 F.
Class III — For use at ambient temperatures above 90 F.

Chemical Requirements. C 928 except that no organic compounds such as epoxy resins or polyesters as the principal binder.

Physical Requirements. Meet the following when tested per MSMT 725:

COMPRESSIVE STRENGTH, psi min				
CLASSIFICATION	**< 2 hr**	**2-6 hr**	**6 hr**	**28 days**
Type I — Slow	—	—	2000	4500
Type II — Rapid	—	2000	—	4500
Type III — Very Rapid	2500	—	—	4500

TEST RESULTS	
TEST PROPERTY	**LIMITS**
Bond Strength, 7 days, psi min	2000
Length Change, increase after 28 days in water, based on length at 3 hr, % max	+0.15
Length Change, decrease after 28 days, % max	- 0.15
Freeze Thaw, loss after 25 cycles in 10% $CaCl_2$ solution, % max	8
Initial Setting Time, minutes min	10

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Marking. All packages delivered to the project shall be marked with the following information:

(a) Date material was packaged.

(b) Approximate setting time.

(c) Recommended dosage of water or liquid component.

(d) Mixing instructions.

(e) Class or temperature range.

Certification. The manufacturer shall furnish certification as specified in TC-1.02 showing the actual test results for each class and type of material submitted to the Laboratory.

902.15 SYNTHETIC FIBERS. When synthetic fibers are specified in the Contract Documents, the fibers shall be 1/2 to 1-1/2 in. long and conform to C 1116, Type III. The manufacturer shall furnish certification as specified in TC-1.02. The quantity of fibers used and their point of introduction into the mix shall conform to the fiber manufacturer's recommendations.

CATEGORY 900
MATERIALS

SECTION 916 — SOIL AND SOIL-AGGREGATE BORROW

916.01 Borrow Excavation.

740 **DELETE:** The third paragraph "Recycled portland ……..TC-6.10." in its entirety.

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CATEGORY 900
MATERIALS

SECTION 951 — PAVEMENT MARKING MATERIALS

951.01 NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKINGS

All nontoxic lead free waterborne pavement marking materials shall be ready-mixed, pigmented binder, emulsified in water, and capable of anchoring reflective beads that are applied separately.

The pavement marking material shall not contain any hazardous material listed in the Environmental Protection Agency Code of Federal Regulations (CFR) 40, Section 261.24, Table 1.

951.01.01 Waterborne Physical Requirements. The nontoxic lead free waterborne pavement marking material shall conform to the manufacturer's formulations as initially approved for use by the Administration and shall be controlled from batch to batch. All paint shall be evaluated in conformance to the requirements listed below.

Production batch samples will be subject to random tests, such as but not limited to, X-ray spectroscopy, infrared spectroscopy, ultraviolet spectral analysis, and atomic absorption spectroscopy.

The combined total of lead, cadmium, mercury, and hexavalent chromium shall not exceed 100 ppm, when tested by X-ray fluorescence spectroscopy, or other method capable of detection at this level.

For each production batch, the Contractor shall provide the Administration with the manufacturer's certified analysis conforming to TC-1.02 of the Standard Specifications.

(a) Viscosity. The viscosity shall be 85 ± 10 KU when tested in conformance with D 562.

(b) Pigment For Yellow Pavement Marking Material. The colorants used to attain the color of the yellow product shall be one or more of the following, along with titanium dioxide: Pigment Yellow 65, Pigment Yellow 75, and opaque Pigment Yellow 74.

(c) Color and Appearance. Color and appearance shall be evaluated using the following: CIE 1976 L*a*b*, illuminant D 65, and standard observer angle 1931 CIE 2 degrees. The geometry shall be 45/0 or 0/45, or d/8, excluding specular gloss. Measurements shall be taken from samples applied to an opacity chart, e.g., Leneta Form 2A, at a wet film thickness of 15 mils ± 1 mil. The applied sample shall have been allowed to dry for at least 12 hours before measurements are taken. The evaluation shall be as follows:

(1) Production: The color of the dry paint film of the production sample shall match the L*a*b* values provided, under the specified conditions. For white material the values are: L* = 94.80, a* = -2.35, b* = 3.20. For yellow material the values are: L* = 80.70, a* = 19.40, b* = 88.65. The colors shall match when compared instrumentally.

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(2) Control. The maximum permissible variation from the specified L*a*b* values shall be 2.0 ΔE_{cmc}. The measurements shall be taken from a sample applied over the black portion of an opacity chart.

The Administration will approve or disapprove any batch based on a laboratory visual evaluation for blemishes and irregularities in the test specimen (i.e. cracks, flaking, surface depressions, pooling, etc.) that would interfere with the measurement of color and appearance on the opacity chart. The Administration will make the final decision.

(3) Reflectance. The reflectance, without beads, and using CIE XYZ Yxy, shall be a minimum Y of 80 percent for white production batches; and a minimum of 50 percent for yellow production batches with a maximum of 60 percent. The measurement shall be taken from a sample applied over the black portion of an opacity chart.

(4) Color Difference over Black and White.. For any production batch the measured color difference between readings taken over the black portion of the opacity chart from those taken over the white portion shall be a maximum value of 1.0 ΔE_{cmc} for white products and 1.3 ΔE_{cmc} for yellow products.

(5) Yellowness Index. The yellowness index of the white material, when determined according to E 313, Using Equation 1 and the coefficients for CIE D 65 illumination, 1931 from Table 1 in that standard, shall not exceed 8.0.

(d) Flexibility. The pigmented binder shall not display cracking or flaking when subjected to the flexibility test of Federal Test Method TT-P 1952D, with the exception that the panels shall be 35 to 31 gauge (0.0078 to 0.0112 in.) tin plate approximately 3 x 6 in. The tin plates shall be lightly buffed with steel wool and thoroughly cleaned with solvent and dried before being used for the test.

(e) Weight per Gallon. The weight per gallon for a production batch, when determined according to D 1475, shall be within ± 0.3 lb/gal of the value obtained by The National Transportation Product Evaluation Program (NTPEP), and reported on a NTPEP deck designated "north". When the Administration waives the NTPEP requirements, another target value will be stipulated.

951.01.03 Glass Bead Physical Requirements. Each lot of glass beads shall be sampled in conformance with the Administration's Frequency Guide and shall be submitted to the Administration's Office of Materials and Technology for testing and approval prior to use.

Glass beads shall be colorless, clean, transparent, and free of milkiness and excessive air bubbles.

Reflective glass beads shall conform to M 247, except that the gradation shall conform to the following:

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PERCENT PASSING			
SIEVE SIZE	**Standard Beads**	**Large Beads**	**Maryland Blend**
12 (1.70 mm)	—	100	100
14 (1.40 mm)	—	95 – 100	98 – 100
16 (1.18 mm)	—	80 – 95	88 – 97
18 (1.00 mm)	—	10 – 40	48 – 70
20 (0.85 mm)	100	0 – 5	28 – 50
30 (0.60 mm)	75 – 95	—	—
50 (0.30 mm)	15 – 35	—	5 – 25
80 (0.18 mm)	—	—	0 – 5
100 (0.15 mm)	0 – 5	—	—

Moisture resistance and flotation test are not required.

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(a) Refractive Index. The refractive index shall be 1.50 minimum, when tested in conformance with MSMT 211.

(b) Roundness. Glass beads shall be smooth, spherical in shape, free of sharp angular scars, scratches, or pits, and shall contain a minimum of 60 percent silica. Beads shall have a minimum average roundness of 75 percent when tested in conformance with D 1155.

951.01.04 Qualification. Pavement marking material manufacturers desiring to have their material formulations approved under this Special Provision shall have their formulations evaluated on a NTPEP North Test Deck unless waived by the Administration. Only NTPEP evaluated formulations will be considered candidates for selection, unless the requirement is waived.

951.01.05 Field testing. Materials conforming to this specification shall be field evaluated for performance on a NTPEP North Test Deck. Materials performing satisfactorily throughout the test period will be placed on the Administration's Qualified Products List. All marking materials supplied under the Contract Documents shall be identical in composition to the materials submitted for initial NTPEP testing. The Office of Materials and Technology will determine conformity with these requirements.

951.01.06 Material Acceptance. Only Administration approved and stamped materials conforming to these Specifications shall be used.

Prior to the shipment of any pavement marking material batch, the manufacturer shall provide access for the Administration's representative to collect samples of the material from each production batch. The samples shall be sent to the Administration laboratory for QA testing. Each sample shall be accompanied by a certified analysis conforming to TC 1.02, showing compliance with the physical and chemical requirements of this Specification, and a statement certifying that any marking material supplied under the Contract Documents is identical in composition to the material submitted for initial NTPEP testing. The Administration will

determine conformity with these requirements. Administration authorization shall be required before a batch or a portion of a batch is shipped.

Paints shall be compatible with cleaning solvents used in equipment cleaning.

Nontoxic waterborne pavement markings shall not skin, curdle, settle or be unusable or difficult to apply within 12 months of the date of manufacture. The supplier, at the Administration's request, shall replace containers of marking material exhibiting an unacceptable level of settling, skinning, or curdling, as determined by the Administration. Marking material from a production batch shall not be used beyond 12 months after the date of manufacture.

951.01.07 Certification. The manufacturer shall explicitly certify in writing that any marking material supplied under the Contract Documents conforms to the formulation identified by the same product code or name placed on the NTPEP test deck from which it was approved. The same code or name as used in the published report from that test deck must identify the product. Failure to certify will be considered grounds for product batch rejection.

The manufacturer shall, in accordance with TC-1.02, explicitly certify, in writing, of any paint batch supplied under the Contract Documents that it complies with all applicable specifications. Failure to so certify will be considered grounds for product batch rejection. Certification for yellow nontoxic lead free waterborne pavement markings shall include, for the purpose of showing compliance with this specification, the name of the type of colorant used to achieve the yellow color. The Administration will keep the paint composition and chemical analysis information confidential.

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The Certification shall also, contain the following:

(a) Manufacturer's name.
(b) Place (address) of manufacture.
(c) Color of material.
(d) Date of manufacture (month-day-year).
(e) Lot or batch identification.
(f) Size of lot/batch.
(g) The recommended paint temperature at the spray gun.
(h) Material Safety Data Sheets for all materials submitted for testing and application.

The Contractor shall furnish a copy of this certification to the Administration's representative before applying the paint batch it represents.

951.01.08 Production Facility.

(a) The producer shall have a facility, presently in operation, capable of producing the traffic paint in the quantity and quality required by the Administration. This facility will be subject to the Administration's approval.

(b) The producer shall have a laboratory, subject to the Administration's approval, that is capable of performing the required tests.

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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.

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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

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(d) Yellowing Index. The yellowing index of the white material shall not exceed 8 prior to QUV and 15 after QUV when tested in accordance with E 313.

951.02.03 Glass Beads Physical Requirements. The glass beads shall conform to M 247 and the following:

GRADATION SIEVE SIZE	PERCENT PASSING
	STANDARD BEADS
0.85 mm (No. 20)	100
0.60 mm (No. 30)	75 - 95
0.30 mm (No. 50)	15 - 35
0.15 mm (No. 100)	0 - 5

Glass beads shall be colorless, clean, transparent, and free of milkiness, excessive air bubbles, and essentially free of sharp angular scarring or scratching. The beads shall be spherical in shape and shall contain a minimum of 60 percent silica. Roundness shall be 75 percent minimum when tested as specified in D 1155, Procedure A.

Glass beads shall have a 1.50 minimum refractive index when tested in conformance with MSMT 211.

Glass beads shall not absorb moisture in storage and shall remain free of clusters or lumps.

951.02.04 Field Testing. Materials conforming to this specification shall be field evaluated at the National Transportation Product Evaluation Program (NTPEP) Northeast test deck for performance. Materials performing satisfactorily throughout the test period will be placed on the Administration's Prequalified Materials List. All marking materials supplied during the Contract shall be identical in composition to the materials submitted for initial testing. Conformity with these requirements will be determined by the Office of Materials and Technology (OMT).

951.02.05 Sampling for Preapproval. Sources supplying thermoplastic material and glass beads shall be submitted by the Contractor to the Engineer for approval in conformance with the Contract Documents.

Each lot of thermoplastic material will be sampled at the source and tested by the Administration over two construction seasons. If 95 percent of the lots tested conform to Specifications, source samples will no longer be required and the manufacturer may ship directly to the project. All shipments shall be accompanied by a manufacturer's certification in conformance with TC-1.02 and shall include the following:

(a) Manufacturer's name.

(b) Place of manufacture.

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(c) Material color.

(d) Date of manufacture (month-year).

(e) Lot identification.

(f) Size/quantity of lot represented.

Random samples will be taken on the project in conformance with the MSMT Sample Frequency Guide and tested for conformance with these specifications. Nonconformance may result in the suspension from the certification program until conformance is reestablished. To reestablish conformance, the manufacturer shall achieve a 95 percent approval level from samples taken at the manufacturer's facility and tested by the Administration prior to shipment to Administration projects.

Each lot of glass beads shall be sampled in conformance with the MSMT Sample Frequency Guide and shall be submitted to the OMT for testing and approval prior to use.

Sampling will be by batch or lot which is defined as a maximum of 44 000 lbs of material.

951.02.06 Certification. The Contractor shall furnish notarized certification as specified in TC-1.02. The manufacturer shall certify that any reflective thermoplastic materials supplied during the Contract conforms to the identical formulation as the samples submitted for evaluation on the NTPEP Northeast test deck, and identify the formulas by referring to the code used on the deck. Reflective thermoplastic materials which fail to conform will be rejected.

The manufacturer shall also provide the following:

(a) Material Safety Data Sheets for all materials submitted for testing and use.

(b) A facility, presently in operation, capable of producing the reflective thermoplastic materials in the quantity and quality required by the Administration.

(c) A laboratory subject to the Administration's approval which is capable of performing the required tests.

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MATERIALS

SECTION 951 — PAVEMENT MARKING MATERIALS

951.04 REMOVABLE PAVEMENT MARKING TAPE. Removable pavement marking tape shall remain in place on the pavement surface without being displaced by traffic, or affected by weather conditions. The material shall be capable of being removed without the use of heat, solvents, grinding, or sand blasting and shall not leave an objectionable residue.

The material shall be of good appearance and free from cracks. Edges shall be true, straight and unbroken. Line marking material shall be in rolls having no more than three splices per 150 ft of length. All marking materials shall be packaged in conformance with accepted commercial standards and shall have a minimum shelf life of one year.

Performance Requirements. When applied in conformance with the manufacturer's recommendations, the material shall provide a neat, durable marking that will not flow or distort due to temperature if the pavement surface or underlying markings remain stable. The material shall be weather resistant and, through normal traffic wear, shall show no lifting or shrinkage that will significantly impair the intended usage of the tape throughout its useful life, and shall show no significant tearing while in place, or other signs of poor adhesion. The material shall be capable of easy removal without tearing into small pieces.

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951.04.01 White and Yellow. Removable preformed pavement marking materials shall conform to the requirements of the MdMUTCD and the following:

(a) Composition. The marking material shall consist of a mixture of polymeric materials, pigment, and glass beads distributed uniformly throughout the surface.

(b) Color. The color of the marking materials shall match Federal Test Standard No. 595 for the following color numbers:

White - 37925
Yellow - 38907

(c) Glass Beads. Glass beads shall conform to the General Requirements of M 247 and have a minimum refractive index of 1.90 when tested as specified in MSMT 211.

(d) Frictional Resistance. The British Pendulum Number shall be a minimum of 50 when tested as specified in E 303.

(e) Certification. Samples submitted to the Office of Materials Technology (OMT) for testing shall be accompanied by the manufacturer's certified analysis in conformance with TC-1.02.

Any material supplied for a Contract shall be identical in composition to the material originally submitted for testing. Conformity will be determined by OMT.

(f) Field Testing. Line marking materials conforming to the Contract Documents will be field tested by The National Transportation Product Evaluation Program (NTPEP) and over 180 day period as specified in MSMT 723 for conformance with the following:

(1) Ease of Application - satisfactory.

(2) Removability - a minimum rating of 2.

(3) Residue Remaining at Time of Removal (day and night) - minimum rating of 2.

(4) Durability, Appearance, and Night Visibility - minimum weighted rating of 4.

(5) Loss or Movement - minimum rating of 2.

Upon satisfactory completion of the field testing, the marking materials will be placed on OMT's Qualified Products List. The material shall conform to all criteria for a minimum period of 120 days to be considered satisfactory.

951.04.02 Black. Removable preformed pavement marking materials shall conform to the requirements of the Md MUTCD and the following:

(a) Composition. The non-reflective blackout tape shall not contain metallic foil and shall consist of a mixture of high quality polymeric materials, pigments, and inorganic fillers distributed throughout its cross-sectional area, with a matte black non-reflective surface. The film shall be pre-coated with a pressure sensitive adhesive. A nonmetallic medium shall be incorporated to facilitate removal.

For patterned materials, a minimum of 20 percent of the total surface area shall be raised and coated with nonskid particles. The channels between the raised areas shall be substantially free of particles.

(b) Color. The color of the blackout material shall match Federal Test Standard No. 595 for the following color numbers:

Black - 37038 (or as approved by the Engineer)

(c) Frictional Resistance. The British Pendulum Number shall be a minimum of 50 when tested as specified in E 303.

(d) Certification. Samples submitted to OMT for testing shall be accompanied by the manufacturer's certified analysis in conformance with TC-1.02.

Any material supplied for a Contract shall be identical in composition to the material originally submitted for testing. Conformity will be determined by OMT.

(e) Field Testing. Line marking materials conforming to the Contract Documents will be field tested by The National Transportation Product Evaluation Program (NTPEP) and over a 180 day period as specified in MSMT 723 for conformance with the following:

(1) Ease of Application - satisfactory.

(2) Removability - a minimum rating of 2. The manufacturer shall show that the blackout tape can be manually removed after its intended use, intact or in large pieces, at temperatures above 40 F without the use of heat, solvents, grinding, or sand or water blasting. The blackout tape shall remove cleanly from existing markings that are adequately adhered to the pavement surface.

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(3) Residue Remaining at Time of Removal (day and night) - minimum rating of 2.

(4) Durability, Adhesion, Appearance, and Night Visibility - minimum weighted rating of 4. The manufacturer shall demonstrate that the properly applied blackout tape adheres to the roadway and existing stable roadway markings under climatic and traffic conditions normally encountered in the construction work zone.

(5) Loss or Movement - minimum rating of 2.

Upon satisfactory completion of the field testing, the marking materials will be placed on OMT's Qualified Products List. The material shall conform to all criteria for a minimum period of 180 days to be considered satisfactory.

951.04.03 Packaging. Preformed pavement markings shipping package shall conform to the manufacturer's shipping requirements to prevent damage during delivery and unloading of all shipments. The shipping package shall be marked with the following information placed on each container:

(a) Description of item.

(b) Date of manufacture.

(c) Successful Bidder's Name.

(d) Purchase Order Number.

(e) Lot Number.

(f) Color.

(g) Installation instructions.

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SECTION 951 — PAVEMENT MARKING MATERIALS

951.05 SNOWPLOWABLE RAISED PAVEMENT MARKERS (SPRPM) and RECESSED PAVEMENT MARKERS (RPM).

Pavement Marker Reflector Lenses. Pavement marker reflector lenses shall conform to the requirements of D 4383 and shall be comprised of materials with adequate chemical, water and UV resistance for the intended use. The reflector lens shall contain one or two prismatic reflective faces to reflect incident light from opposite directions. The reflector lens shall be in the shape of a shallow frustum of a pyramid. The bottom of the reflector lens shall be equipped with an elastomeric pad to permit its attachment to the surface of the casting using the manufacturer's recommended adhesive. The lens faces shall provide extremely hard and durable abrasion resistant surfaces.

Pavement marker reflector lenses shall be 4.00 x 2.00 x 0.46 in. The slope of the reflecting surface shall be 30 degrees and the area of each reflecting surface shall be 1.7 in.^{2}. The outer surface of the shell shall be smooth except in identification areas.

The pavement marker reflector lens shall be imprinted with the model number and the manufacturer's name.

SPRPM Casting. Both ends of the casting shall be shaped to deflect a snow plow blade. The bottom of the casting shall incorporate two parallel keels and an arcuately shaped web designed to fit into a grooved surface. Casting dimensions shall be a minimum of 9.25 x 5.86 x 1.69 in. and shall not exceed 10.5 x 7.25 x 1.69 in. The installed height shall not exceed 0.25 in. above the road surface.

The casting shall be nodular iron conforming to A 536, Grade 80-55-06, hardened to 51 to 55 $R_{C.}$ The surface of the keel and web shall be free of scale, dirt, oil, grease or any other contaminant, which may reduce its bond to the epoxy adhesive.

The casting shall be imprinted with the model number and the manufacturer's name.

Recessed Pavement Marker Adhesive. The adhesive used to fasten the pavement marker lens to the pavement surface shall conform to D 4383-05 Table X1.4.2.3 M 237 Type II. Rapid Set Type adhesives shall not be used.

Casting Adhesive. The epoxy adhesive used to fasten the castings to the pavement surface shall conform to D 4383-05 Table X1.1.

Reflector Lens Adhesive in Casting. The adhesive used to fasten the reflector lens to the casting shall conform to the manufacturers' recommendations.

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951.05.01 Field Testing. Materials conforming to SPRPM Specification shall be field evaluated at the National Transportation Product Evaluation Program (NTPEP) Northeast test deck for performance. Materials conforming to recessed pavement marker specification shall be field evaluated at any (NTPEP) test deck for performance. Materials performing satisfactorily throughout the test period will be placed on the Administrations Prequalified Materials List. All marking materials supplied during the Contract shall be identical in composition to the materials submitted for initial testing. Random sampling will be performed on projects sites. Conformity with these requirements will be determined by the Office of Materials Technology (OMT).

951.05.02 Facility Sampling. Random testing of samples will be performed by the Administration as Quality Assurance and certification verification. Materials will be periodically sampled at the manufacturer's facility by the Administration. Each sample shall be accompanied by a certification showing compliance with the physical requirements of this Specification. 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 OMT.

Sources supplying materials shall be submitted by the Contractor to the Engineer for approval in conformance with the Contract Documents.

The material manufacturer shall reimburse the Administration for the cost of sampling and shipment of the samples when sampled by the Administration.

Material Shipment. The components shall be shipped in containers sealed by the manufacturer. The label on each container shall include the following information:

(a) Manufacturer's Name.

(b) Place of Manufacture.

(c) Color of Material and Component Type.

(d) Date of Manufacture (month-year).

(e) Batch and Lot Identification Number.

(f) Size/quantity of lot represented.

951.05.03 Certification. The Contractor shall furnish notarized certification as specified in TC-1.02.

The manufacturer shall certify that any SPRPM materials supplied during the Contract conforms to the identical composition of the samples submitted for evaluation on the NTPEP Northeast Test Deck, and identify the SPRPM materials by referring to the code used on the deck. PRPM materials which fail to conform will be rejected.

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The manufacturer shall certify that any recessed pavement marker materials supplied during the Contract conforms to the identical composition of the samples submitted for evaluation on any NTPEP Test Deck, and identify the recessed pavement marker materials by referring to the code used on the deck. Recessed pavement marker 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, in operation, capable of producing the materials in the quantity and quality required by the Administration.

(c) A laboratory capable of performing the required tests. This laboratory will be subject to the Administration's approval.

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SECTION 951 — PAVEMENT MARKING MATERIALS

951.06 HEAT APPLIED PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING MATERIAL. The material shall be highly durable retroreflective polymeric materials designed for use as transverse lines, numbers, legends, symbols and arrow markings subjected to high traffic volumes and severe wear conditions such as shear action from crossover or encroachment.

The applied material shall adhere to hot mix asphalt (HMA), open-grade friction courses (OGFC), stone matrix asphalt (SMA), portland cement concrete (PCC), and any existing pavement markings when applied using normal heat from a propane fueled heat gun in conformance with manufacturer's recommendations.

The applied material shall be capable of conforming to pavement contours, breaks and faults, shall not be affected by weather conditions, and shall remain in place on pavement surfaces without being displaced by traffic.

The material shall have a minimum shelf life of one year.

The material shall conform to the requirements of the MUTCD and the following:

(a) Composition. The material shall consist of polymeric materials, pigments, binders and glass beads distributed throughout the entire cross-sectional area. The thermoplastic material shall conform to M 249 with the exception of the relevant differences for the material being supplied in the preformed state.

Restrictions. The combined total of lead, cadmium, mercury and hexavalent chromium shall not exceed 100 ppm when tested by X-ray diffraction, ICP, or comparable method capable of this level of detection. Nonleachable lead based pigments will not be permitted. Diarylide type pigments shall only be used when the manufacture or pavement marking material application temperature does not exceed 392 F.

(b) Color. Preformed markings shall consist of film with pigments selected and blended to match Federal Standard 595 color chip Nos. 17886 and 13538 for white and yellow respectively.

(c) Frictional Resistance. The surface of the applied material shall provide a minimum average skid resistance value of 50 BPN when tested in conformance with E 303.

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(d) Patchability. The material shall be capable of use for patching worn areas of the same type in conformance with manufacturer's recommendations.

(e) Thickness. The minimum thickness, without adhesive, shall be 120 mils.

(f) Adhesion. The material shall retain a minimum of 65 percent adhesive bond after 100 cycles of freeze-thaw when tested in conformance with C 666, Method B.

(g) Beads.

(1) Index of Refraction. All beads shall meet the general requirements of M 247, Type I, and shall have a minimum index of refraction of 1.50 when tested using the liquid oil immersion method specified in MSMT 211.

(2) Acid Resistance. A maximum of 15 percent of the beads shall show a formation of a distinct opaque white layer on the entire surface after exposure to a 1 percent solution (by weight) of sulfuric acid in conformance with MSMT 211.

Field Testing. Materials conforming to this Specification shall be field tested at AASHTO regional test facilities, such as National Transportation Product Evaluation Program (NTPEP), for performance.

Materials performing satisfactorily throughout the test period, including exhibiting a minimum retained reflectance of 100 mcd/m²/lux at the completion of the testing, will be placed on the Prequalified Materials List maintained by the Office of Materials and Technology.

Certification. Any marking material supplied during the Contract shall be identical in composition to the material submitted for initial testing. Samples submitted for testing shall be accompanied by the manufacturer's certified analysis in conformance with TC-1.02.

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SECTION 951 — PAVEMENT MARKING MATERIALS

951.07 PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT (PPPRP) 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.

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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/m^2 for white and 250 mcd/L/m^2 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).

(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-1.02. The manufacturer shall certify that any reflective thermoplastic materials supplied during the Contract conforms to the identical formulation as the samples submitted for evaluation on the NTPEP Northeast test deck, and identify the formulas by referring to the code used on the deck. Reflective thermoplastic materials which fail to conform will be rejected.

The manufacturer shall also provide the following:

(a) Material Safety Data Sheets for all materials submitted for testing and use.

(b) A facility, presently in operation, capable of producing the reflective thermoplastic materials in the quantity and quality required by the Administration.

(c) A laboratory subject to the Administration's approval which is capable of performing the required tests.

FOR REVIEW PURPOSES ONLY

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
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 for **Grind, patch and resurface roadway pavements at various locations**, the work being located in, **Calvert County** County, Maryland, for which Invitation for Bids will be received until 12:00 o'clock noon on **Thursday, March 12, 2009**, this work being situated as follows:

FOR REVIEW PURPOSES ONLY

To the State Highway Administration
BID BOX
7450 Traffic Drive
Hanover, Maryland 21076

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.

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
1001 100000	1	EACH OF Laptop Computer	XXX				
1002 110500	144,000	EACH OF PRICE ADJUSTMENT FOR DIESEL FUEL	XXX SP	1	00	144,000	00
1003 114005	15,000	LINEAR FEET OF 5 INCH YELLOW NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT	104.11 SP				
1004 114010	15,000	LINEAR FEET OF 5 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT	104.11 SP				
1005 114045	1,000	LINEAR FEET OF 24 INCH WHITE NONTOXIC LEAD FREE WATERBORNE PAVEMENT MARKING PAINT	104.11 SP				
1006 114215	10,000	LINEAR FEET OF 5 INCH YELLOW REMOVABLE PREFORMED PAVEMENT LINE MARKINGS	104.11 SP				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
1007 114220	10,000	LINEAR FEET OF 5 INCH WHITE REMOVABLE PREFORMED PAVEMENT LINE MARKINGS	104.11 SP				
1008 114245	1,000	LINEAR FEET OF 24 INCH WHITE REMOVABLE PREFORMED PAVEMENT LINE MARKINGS	104.11 SP				
1009 114255	75	EACH OF REMOVABLE PREFORMED SYMBOLS	104.11 SP				
1010 114260	75	EACH OF REMOVABLE PREFORMED ARROWS	104.11 SP				
1011 114270	150	EACH OF REMOVAL OF REMOVABLE PREFORMED LETTERS, SYMBOLS, ARROWS AND NUMBERS	104.11 SP				
1012 114275	20,000	LINEAR FEET OF REMOVAL OF REMOVABLE PREFORMED PAVEMENT MARKINGS - ANY WIDTH	104.11 SP				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
1013 120510	148	PER UNIT DAY MAINTENANCE OF TRAFFIC	104				
1014 120561	300	TONS OF HOT MIX ASPHALT FOR MAINTENANCE OF TRAFFIC	106				
1015 120610	200	PER UNIT DAY ARROW PANEL	104.07				
1016 120625	3,000	SQUARE FEET OF TEMPORARY TRAFFIC SIGNS HIGH PERFORMANCE WIDE ANGLE RETROREFLECTIVE SHEETING	104.08				
1017 120820	300	EACH OF DRUMS FOR MAINTENANCE OF TRAFFIC	104.12				
1018 120860	150	PER UNIT DAY PORTABLE VARIABLE MESSAGE SIGN	104.19				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
1019 120890	150	PER UNIT DAY PROTECTION VEHICLE	104.23				
1020 130850	LUMP SUM	MOBILIZATION (MAXIMUM 3% of TOTAL BID)	108	LUMP SUM			

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
2001 201031	50	CUBIC YARDS OF CLASS 1-A EXCAVATION	201				
2002 201032	100	CUBIC YARDS OF CLASS 2 EXCAVATION	201				
2003 202050	100	CUBIC YARDS OF SELECT BORROW	203				
2004 202065	100	CUBIC YARDS OF COMMON BORROW	203				
2005 203030	100	CUBIC YARDS OF TEST PIT EXCAVATION	205				
2006 210025	100	CUBIC YARDS OF REMOVAL OF EXISTING PAVEMENT	206				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
2007 210030	100	CUBIC YARDS OF REMOVAL OF EXISTING MASONRY	207				

FOR REVIEW PURPOSES ONLY

STATE CONTRACT - XX1045168
FEDERAL CONTRACT - AC-STP-NH-000A(369)E, ES-000A(369)E Page 2 - 6 of 14

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
3001 301312	50	CUBIC YARDS OF BRICK MASONRY FOR MISCELLANEOUS STRUCTURES	305				
3002 301315	50	CUBIC YARDS OF MIX 3 CONCRETE FOR MISCELLANEOUS STRUCTURES	305				
3003 380201	30	EACH OF ADJUST EXISTING INLET	XXX				

FOR REVIEW PURPOSES ONLY

STATE CONTRACT - XX1045168
FEDERAL CONTRACT - AC-STP-NH-000A(369)E, ES-000A(369)E Page 2 - 7 of 14

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
5001 504014	500	TONS OF HOT MIX ASPHALT SUPERPAVE 4.75MM FOR SURFACE, PG64-22, LEVEL-2	504				
5002 504086	20,000	TONS OF HOT MIX ASPHALT SUPERPAVE 9.5MM FOR SURFACE, PG64-22, LEVEL-2	504				
5003 504102	5,000	TONS OF HOT MIX ASPHALT SUPERPAVE 9.5mm FOR WEDGE/LEVEL, PG64-22, LEVEL -2	504				
5004 504220	10,000	TONS OF HOT MIX ASPHALT SUPERPAVE 12.5mm, PG64-22, 8PV, LEVEL-2	504				
5005 504298	7,000	TONS OF HOT MIX ASPHALT SUPERPAVE 19.0mm FOR BASE, PG64-22, LEVEL-2	504				
5006 504312	1,200	TONS OF HOT MIX ASPHALT SUPERPAVE 19.0mm FOR FULL DEPTH PATCH, PG64-22, LEVEL-2	505				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
5007 504324	2,500	TONS OF HOT MIX ASPHALT SUPERPAVE 19.0mm FOR PARTIAL DEPTH PATCH, PG64-22, LEVEL-2	505				
5008 504600	144,000	EACH OF PRICE ADJUSTMENT FOR ASPHALT BINDER	504 SP	1	00	144,000	00
5009 504605	144,000	EACH OF PAYMENT ADJUSTMENT FOR PAVEMENT DENSITY	504 SP	1	00	144,000	00
5010 504610	144,000	EACH OF PAYMENT ADJUSTMENT FOR HOT MIX ASPHALT MIXTURE	504 SP	1	00	144,000	00
5011 520113	500	SQUARE YARDS OF 6 INCH GRADED AGGREGATE BASE COURSE	501				
5012 530100	100,000	SQUARE YARDS OF GRINDING HOT MIX ASPHALT PAVEMENT 0 INCH TO 2 INCH	509				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
5013 535100	144,000	EACH OF PAVEMENT SURFACE PROFILE PAY ADJUSTMENT	535 SP	1	00	144,000	00
5014 585340	2,500	EACH OF SNOWPLOWABLE RAISED PAVEMENT MARKERS	557 SP				
5015 585405	15,000	LINEAR FEET OF 5 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	553 SP				
5016 585407	15,000	LINEAR FEET OF 5 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	553 SP				
5017 585408	5,000	LINEAR FEET OF 10 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	553 SP				
5018 585410	5,000	LINEAR FEET OF 10 INCH YELLOW LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	553 SP				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
5019 585424	1,500	LINEAR FEET OF 24 INCH WHITE LEAD FREE REFLECTIVE THERMOPLASTIC PAVEMENT MARKINGS	553 SP				
5020 585600	20,000	LINEAR FEET OF 5 INCH WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	559 SP				
5021 585602	5,000	LINEAR FEET OF 10 INCH WHITE PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	559 SP				
5022 585604	20,000	LINEAR FEET OF 5 INCH YELLOW PERMANENT PREFORMED PATTERNED REFLECTIVE PAVEMENT MARKINGS	559 SP				
5023 585627	500	SQUARE FEET OF WHITE PREFORMED THERMOPLASTIC PAVEMENT MARKING LEGENDS AND SYMBOLS	556 SP				
5024 599020	200	TONS OF HOT MIX ASPHALT SUPERPAVE 9.5mm FOR BRIDGE APPROACHES, PG70-22, LEVEL-2	504				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
6001 616501	1,500	SQUARE YARDS OF TOPSOIL FOR SHOULDER EDGE DROPOFF	609				
6002 616600	1,000	TONS OF HOT MIX ASPHALT MILLINGS OR GRINDINGS FOR SHOULDER EDGE DROP OFF	609				
6003 616700	3,000	LINEAR FEET OF SHOULDER RUMBLE STRIPS	610				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS	SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
8001 805115	100	LINEAR FEET OF 3 INCH SCHEDULE 80 RIGID PVC CONDUIT-BORED	805				
8002 805150	100	LINEAR FEET OF 3 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	805				
8003 805160	100	LINEAR FEET OF 1 INCH LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR SLEEVE	805				
8004 810555	16	EACH OF MICROLOOP PROBE, 1000 FOOT LEAD IN CABLE	XXX				
8005 862101	1,000	LINEAR FEET OF LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 AWG)	810				
8006 862102	1,000	LINEAR FEET OF SAW CUT FOR SIGNAL (LOOP DETECTOR)	815				

FOR REVIEW PURPOSES ONLY

ITEM NO. CCS NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEMS SECTION	UNIT PRICE DOLLARS	UNIT PRICE CENTS	AMOUNTS DOLLARS	AMOUNTS CENTS
		AGGREGATE AMOUNT AT UNIT PRICES ALTERNATE A IS USING BID 1001-1020, 2001-2007, 3001-3003, 5001-5024, 6001-6003, 8001-8006				
		THIS PROPOSAL SHALL BE FILLED IN BY THE BIDDER WITH PRICES IN NUMERALS AND EXTENSIONS SHALL BE MADE BY HIM.				

FOR REVIEW PURPOSES ONLY

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

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. A nationwide waiver for this provision has been granted for pig iron and processed, pelletized, and reduced iron ore.

All bidders shall submit a bid using Domestic Iron and Steel Products with coatings that have been applied inside the United States. If the bidder elects, an additional alternate bid may be submitted using Foreign Products on one or more of the above items in this Contract.

The Contract, if awarded, will be awarded to the 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.

When steel and iron products and/or coatings are used in a project, the Contractor is not prohibited from using a minimal amount of foreign steel and iron products and/or coatings, if the cost of such materials used does not exceed one-tenth of one percent (0.1 %) of the total contract cost or $2,500, whichever is greater.

FOR REVIEW PURPOSES ONLY

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)_____

FOR REVIEW PURPOSES ONLY

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).

FOR REVIEW PURPOSES ONLY

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.

FOR REVIEW PURPOSES ONLY

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 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):

_____
_____
_____.

FOR REVIEW PURPOSES ONLY

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 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 and subsections (1) through (7) 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):
_____
_____
_____.

FOR REVIEW PURPOSES ONLY

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, has ever been suspended or debarred (including being issued a limited denial of participation) by any public entity, except as follows (list each debarment or suspension providing the dates of the suspension or debarment, the name of the public entity and the status of the 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):
_____
_____
_____.

FOR REVIEW PURPOSES ONLY

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:

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.

FOR REVIEW PURPOSES ONLY

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.)

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;

FOR REVIEW PURPOSES ONLY

(g) Provide all employees engaged in the performance of the contract with a copy of the statement required by §J(2)(b), above;

(h) Notify its employees in the statement required by §J(2)(b), above, that as a condition of continued employment on the contract, the employee shall:

(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 §J(2)(h)(ii), above, or otherwise receiving actual notice of a conviction;

(j) Within 30 days after receiving notice under §J(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 §J(2)(a)—(j), above.

FOR REVIEW PURPOSES ONLY

3. If the business is an individual, the individual shall certify and agree as set forth in §J(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.

FOR REVIEW PURPOSES ONLY

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

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 convenants 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)

FOR REVIEW PURPOSES ONLY

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.

FOR REVIEW PURPOSES ONLY

IF AN INDIVIDUAL:

NAME:_____

_____
Street and/or P.O. Box

_____ _____
City State Zip Code Fed ID or SSN

_____(SEAL)_____
Signature Date

_____
Print Signature

WITNESS:_____
Signature

_____
Print Signature

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) _____
Member Signature Date

_____
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) _____
Signature Date

_____
Print Signature

TITLE:_____ WITNESS:_____
Secretary's Signature

_____
Print Signature

FOR REVIEW PURPOSES ONLY

MDOT DBE FORM A - (MDOT-OP 016-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
CERTIFIED DBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
Page 1 of 2

THIS AFFIDAVIT MUST BE INCLUDED WITH THE BID. IF THE BIDDER FAILS TO ACCURATELY COMPLETE AND SUBMIT THIS AFFIDAVIT AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE.

In connection with the proposal submitted in response to Solicitation No. **XX1045168**, I affirm the following:

1. **DBE Participation (PLEASE CHECK ONLY ONE)**

☐ I have met the overall certified Disadvantaged Business Enterprise (DBE) participation goal of **tweleve percent** (**12%**). I agree that the DBE firms listed in the DBE Participation Schedule - Part 2 of the MDOT DBE Form B (Federally-Funded Contracts – Bids Only) will be used to accomplish the DBE participation goal for this Contract for at least the dollar amounts set forth therein.

OR

☐ I conclude that I am unable to achieve the DBE participation goal. I hereby request a waiver of the overall 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. I agree that the DBE firms listed in the DBE Participation Schedule - Part 2 of the MDOT DBE Form B (Federally-Funded Contracts – Bids Only) will be used to accomplish the DBE participation goal for this Contract for at least the dollar amounts set forth therein.

FOR REVIEW PURPOSES ONLY

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 – Bids Only);
(b) Subcontractor Project Participation Statement (MDOT DBE Form D - Federally-Funded Contracts – Bids Only);
(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 in connection with the certified DBE participation goal.

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.

MDOT DBE FORM A - (MDOT-OP 016-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
CERTIFIED DBE UTILIZATION AND FAIR SOLICITATION AFFIDAVIT
Page 2 of 2

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.

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

FOR REVIEW PURPOSES ONLY

SUBMIT THIS AFFIDAVIT WITH BID/PROPOSAL

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
DBE PARTICIPATION SCHEDULE

PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
Page 1 of 3

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID. IF THE BIDDER FAILS TO ACCURATELY COMPLETE AND SUBMIT PART 2 AND 3 WITH THE BID AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE.

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

FOR REVIEW PURPOSES ONLY

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 goal. Graduated status is clearly identified in the MDOT Directory (such graduated codes are designated with the letter "G" 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 used to achieve the DBE participation goal.

4. If you have any questions as to whether a firm is certified to perform the 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.

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 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 in Part 2 of this DBE Participation Schedule.

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
Page 2 of 3

6. For each DBE firm that is being used as supplier/wholesaler/regular dealer/broker/manufacturer, please follow these instructions for calculating the **dollar 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. In Column 5 of the DBE Participation Schedule, please state the amount of any reasonable fee that the DBE firm will receive for the provision of such products/services in Section 5.3.

   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. In Column 5 of the DBE Participation Schedule, please state the total amount of the subcontract in Section 5.1.

   E. Is the firm certified as a supplier, wholesaler and/or regular dealer? If the answer is YES (i) if the DBE firm is furnishing and installing the materials and is certified to perform these services, please include in Section 5.1 the total value of the subcontract amount (including full value of supplies); or (ii) if the 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). In Column 5, Section 5.2 of the DBE Participation Schedule, please state amount of the subcontract for these supplies/products only (not installation) and sixty percent (60%) of such value.

7. Cumulative credit given for the use of all DBE suppliers/wholesalers/regular dealers/brokers/manufacturer in the DBE Participation Schedule cannot exceed sixty percent (60%) of the entire DBE participation goal. For example, if your bid is $100,000 and you have indicated that you will achieve $25,000 in DBE Participation, the cumulative participation by DBE firms that are suppliers, manufacturers, wholesalers, brokers and regular dealers cannot exceed $15,000 (or 60% of $25,000).

FOR REVIEW PURPOSES ONLY

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
PART 1 – INSTRUCTIONS FOR DBE PARTICIPATION SCHEDULE
Page 3 of 3

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 5 for all of the DBE firms listed in Part 2, MUST equal at least the DBE participation goal as set forth in MDOT DBE Form A – Federally-Funded Contracts (Bids Only) for this solicitation. If a bidder is unable to achieve the DBE participation goal, then the bidder must request a waiver in Form A or the bid shall be deemed not responsive. You may wish to use the Worksheet shown below to assist you in calculating the percentages and confirming that you have met the applicable DBE participation goal.

WORKSHEET

Total DBE Firm Participation Amount	$_____
(Add amounts listed for all DBE Firms in Column 5 of DBE Participation Schedule)	
Divide by Total Contract Amount	+_____
Percent Overall DBE Participation	**=_____%**

FOR REVIEW PURPOSES ONLY

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
PART 2 – DBE PARTICIPATION SCHEDULE

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID. IF THE BIDDER FAILS TO ACCURATELY COMPLETE AND SUBMIT PARTS 2 AND 3 WITH THE BID AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE.

Page __ of ___

Prime Contractor	Project Description	Solicitation Number

List Information for each Certified MBE Subcontractor used to achieve the DBE Participation Goal.

FOR REVIEW PURPOSES ONLY

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5
				Unless the bidder requested a waiver in MDOT DBE Form A – Federally Funded Contracts (Bids Only) 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**	**Total Subcontractor Amount**	**NAICS Codes/s** **NAICS Code/s of the specific products to be supplied or services to be performed by the DBE firm**	**Dollar Amount(s) for purposes of achieving the DBE Participation Goal.** State the dollar amount of the products/services in Line 5.1 except for those services or products where the DBE firm is being used as a wholesaler, supplier, regular dealer, or broker. For those items of work where the DBE firm is being used as a supplier, wholesaler and/or regular dealer complete Line 5.2 using the 60% Rule. For those items of work where the DBE firm is being used as a broker, complete Line 5.3.
☐ 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: _____ ☐ Women-Owned ☐ African American-Owned ☐ Other DBE Classification	**$**		**5.1 Subcontract Amount for Products/Services** (Excluding Products/Services from Suppliers, Wholesalers, Regular Dealers and Brokers) **$** **5.2 Amount for Items of Work where the MBE firm is being used as Suppliers, Wholesalers and/or Regular Dealers)** (Please refer to Section 6(E) in Part 1 - Instructions). Total value of Supplies/Products **$** X 60% (60% Rule) = $ (amount for purposes of achieving the DBE Participation Goal). **5.3 Amount of Fee where DBE firm is being used as Broker** (Please refer to Section 6(C) in Part 1 - instructions). **$**

☐Please check if Continuation Sheets are attached.

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
CONTINUATION SHEET
Page __ of ___

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5 **Unless the bidder requested a waiver in MDOT DBE Form A – Federally Funded Contracts (Bids Only) 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**	**Total Subcontractor Amount**	**NAICS Codes/s** **NAICS Code/s of the specific products to be supplied or services to be performed by the DBE firm**	**Dollar Amount(s) for purposes of achieving the DBE Participation Goal.** State the dollar amount of the products/services in Line 5.1 except for those services or products where the DBE firm is being used as a wholesaler, supplier, regular dealer, or broker. For those items of work where the DBE firm is being used as a supplier, wholesaler and/or regular dealer complete Line 5.2 using the 60% Rule. For those items of work where the DBE firm is being used as a broker, complete Line 5.3.
☐ 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: _____ ☐ Women-Owned ☐ African American-Owned ☐ Other DBE Classification	**$**		**5.1 Subcontract Amount for Products/Services** (Excluding Products/Services from Suppliers, Wholesalers, Regular Dealers and Brokers) **$** **5.2 Amount for Items of Work where the MBE firm is being used as Suppliers, Wholesalers and/or Regular Dealers)** (Please refer to Section 6(E) in Part 1 - Instructions). Total value of Supplies/Products **$** X 60% (60% Rule) = $ (amount for purposes of achieving the DBE Participation Goal). **5.3 Amount of Fee where DBE firm is being used as Broker** (Please refer to Section 6(C) in Part 1 - instructions). **$**

FOR REVIEW PURPOSES ONLY

MDOT DBE FORM B - (MDOT-OP 017-2)
FEDERALLY-FUNDED CONTRACTS (BIDS ONLY)
PART 3 – CERTIFICATION FOR DBE PARTICIPATION SCHEDULE

PARTS 2 AND 3 MUST BE INCLUDED WITH THE BID. IF THE BIDDER FAILS TO ACCURATELY COMPLETE AND SUBMIT PARTS 2 AND 3 WITH THE BID AS REQUIRED, THE BID SHALL BE DEEMED NOT RESPONSIVE.

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.

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.

FOR REVIEW PURPOSES ONLY

_____	_____
Company Name	Signature of Representative
_____	_____
Address	Printed Name and Title
_____	_____
City, State and Zip Code	Date

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:

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

FOR REVIEW PURPOSES ONLY

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 26A of 28, 26B of 28, 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

FOR REVIEW PURPOSES ONLY

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

N/A (working days)

Completion Date: Friday, December 30, 2011 (calendar date)

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.

FOR REVIEW PURPOSES ONLY

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

N/A dollars (N/A) per working day

N/A dollars (N/A) per calendar day

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

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 "State of Maryland". 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).

FOR REVIEW PURPOSES ONLY

MARYLAND STATE HIGHWAY ADMINISTRATION

SUBCONTRACTING

Subcontracting by the Prime Contractor. Form OOC 42 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 OOC 43 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 OOC 42 and Form OOC 43 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.

FOR REVIEW PURPOSES ONLY