COMMONWEALTH OF VIRGINIA
DEPARTMENT OF TRANSPORTATION
SEPARATE-COVER CONTRACT DOCUMENTS

SPECIAL PROVISION COPIED NOTES, SPECIAL PROVISIONS, AND SUPPLEMENTAL SPECIFICATIONS FOR

PLANT MIX SCHEDULES — STATEWIDE

2013 PAVING SEASON

ORDER NO.:	See Bid Proposal and Contract
CONTRACT ID. NO.:	See Bid Proposal and Contract
ROUTE NUMBER:	VARIOUS
FHWA NUMBER:	See Bid Proposal and Contract
PROJECT NUMBER:	See Bid Proposal and Contract
COUNTY:	ALL
DISTRICT:	ALL

DESCRIPTION:	PLANT MIX SCHEDULES (VOLUME 2 OF 2)
LOCATION:	STATEWIDE
DATE BID SUBMITTED:	See Bid Proposal and Contract

VOLUME 2 OF 2

STANDARD PROVISIONS:

2013 PLANT MIX SCHEDULES

Please see Volume 1 (the "Bid Proposal and Contract") for forms, Schedule of Items, Plant Mix Schedules, special provision copied notes (SPCNs), special provisions (SPs), supplemental specifications (SSs), sketches, drawings, general notes and other written information specific to the project that this document assembly (Volume 2) accompanies.

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VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
VOLUME 1 AND 2 CONTRACTS

September 7, 2012

GENERAL PROJECT REQUIREMENTS, SUPPLEMENTAL SPECIFICATIONS (SSs), SPECIAL PROVISIONS (SPs) AND SPECIAL PROVISION COPIED NOTES (SPCNs)

This project shall be constructed in accordance with: the plans; the *Virginia Department of Transportation Road and Bridge Specifications*, dated 2007; the *Virginia Department of Transportation Road and Bridge Standards*, dated 2008; the 2011 edition of the *Virginia Work Area Protection Manual*; the 2009 edition of the *MUTCD* and the current *Virginia Supplement to the MUTCD;* and the Supplemental Specifications, Special Provisions and Special Provision Copied Notes in this contract.

Special Provision Copied Notes in this contract are designated with "(SPCN)" after the date.

The information enclosed in parenthesis "()" at the left of each Special Provision Copied Note in this contract is file reference information for Department use only. The information in the upper left corner above the title of each Supplemental Specification and Special Provision in this contract is file reference information for Department use only.

The Department has identified the system of measurement to be used on this particular project as imperial. Any imperial unit of measure in this contract with an accompanying expression in a metric unit shall be referred to hereinafter as a "dual unit" measurement. Such a "dual unit" measurement is typically expressed first in the imperial unit followed immediately to the right by the metric unit in parenthesis "()" or brackets "[]" where parenthesis is used in the sentence to convey other information. Where a "dual unit" of measure appears in this project, only the imperial unit shall apply. The accompanying metric unit shown is not to be considered interchangeable and mathematically convertible to the imperial unit and shall not be used as an alternate or conflicting measurement.

VOLUME 1 AND 2 CONTRACT DOCUMENTS STATUS

This contract consists of two "Volumes" of Supplemental Specifications (SSs), Special Provisions (SPs) and Special Provision Copied Notes (SPCNs). Volume 1 is the contract document assembly titled "Bid Proposal and Contract". Volume 2 is the contract document assembly titled "Separate-Cover Contract Documents". The SSs, SPs and SPCNs contained in Volume 1 and the accompanying Volume 2 are binding parts of the Contract. Each SS, SP, and SPCN in Volume 1 and Volume 2 shall carry the same status in the Contract as that stated in Section 105.12 of the Specifications.

VOLUME 1 AMENDMENTS TO VOLUME 2

The Supplemental Specifications (SSs), and Special Provisions (SPs) in Volume 2 may be amended by a SPCN(s) in Volume 1 specifically written to amend Volume 2. Such Volume 1 SPCN(s) that amend provisions of Volume 2 may do so by any of the following:

- Specifying the Volume 2 text or drawing or portion of a drawing in a SS or SP that is deleted, appended, or replaced and specifying the provision(s) in Volume 1 that appends or replaces it.

- Specifying an entire Volume 2 SS(s) or SP(s) is deleted or replaced and specifying the SS(s), SP(s), or SPCN(s) in Volume 1 that replaces it.

Such Volume 1 amendments to Volume 2 or any other SSs, SPs and SPCNs in Volume 1 shall carry the same status in the Contract as that stated in Section 105.12 of the Specifications.

VOLUME 2 SPECIFICATIONS SPECIFIC TO PLANT MIX SCHEDULES

Certain Supplemental Specifications (SSs), SPs and SPCNs, which as standard practice, appear in contracts as published on the Departments website at http://www.virginiadot.org/business/const/spec-default.asp have been modified to specifically and more concisely address Plant Mix requirements statewide. Such Supplemental Specifications (SSs), Special Provisions (SPs) and Special Provision Copied Notes (SPCNs) are listed with modifications identified as follows:

- SS for **SUPPLEMENTAL DIVISION I—GENERAL PROVISIONS** was redesignated as an SP and retitled **DIVISION I—GENERAL PROVISIONS (PLANT MIX SCHEDULES)** and modified as follows:

  — Text from SPCN for **SECTION 102.05—PREPARATION OF BID** dated 10-21-08 was added.

  — Text from SPCN for **SECTION 104.01—INTENT OF CONTRACT** dated 10-21-08 was added.

  — Text from SPCN for **SECTION 105.06 SUBCONTRACTING** dated 12-19-08 was added.

  — Text from SP for **SECTION 107.15** dated 12-10-10 was added.

  — Existing text for paragraph revising **Section 107.21—Size And Weight Limitations** was replaced with text from SPCN for **SECTION 107.21—SIZE AND WEIGHT LIMITATIONS** dated 10-21-08.

  — Text from SPCN for **SECTION 108.01—PROSECUTION OF WORK** dated 8-17-10 was added.

  — Text from SPCN for **108.02—LIMITATION OF OPERATIONS** dated 9-7-12 was added.

EXCEPTIONS SPECIFIC TO A DISTRICT, RESIDENCY OR COUNTY

The Contractor's attention is directed to the Volume 1 contract document assembly, which contains Special Provisions (SPs) and Special Provision Copied Notes (SPCNs) with requirements written for and shall apply only to the specific district, residency, or county stated therein. The Contractor shall take note of and be governed by such requirements therein.

The Contractor's attention is also directed to this Volume 2 contract document assembly containing certain Supplemental Specifications (SSs), and Special Provisions (SPs) for Asphalt Plant Mix Schedule contract requirements structured to address statewide requirements with exceptions or additions written specifically for a district, residency, or county within. The Contractor shall take note of and be governed by such requirements therein. Such are found in the following:

- SP for **VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS CONTROL AREAS**

- SS for **SECTION 248—STONE MATRIX ASPHALT CONCRETE**

S100B00-0708

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PROJECT COMMUNICATION AND DECISION MAKING

January 3, 2005c
Reissued July 2008

I. DESCRIPTION

The intent of this provision is to establish procedures, processes and guidelines for making decisions and managing communications regarding work under contract on construction and maintenance projects. The information contained herein is not meant to be all inclusive but to serve as a minimal general framework for promoting efficient and effective communication and decision making at both the project and, if needed, executive administrative level. It is also not meant to override the decision-making processes or timeframes of specific contract requirements.

II. DEFINITIONS

For the purposes of this provision the following terms will apply and be defined as follows:

Submittals – Documents required by the contract that the Contractor must submit for the Department's review, acceptance or approval. These may include shop drawings, working drawings, material test reports, material certifications, project progress schedules, and schedule updates. The Contractor shall produce submittals as early as practicable when required by the contract so as not to delay review and determination of action.

Confirmation of verbal instructions (COVI) - Contractor requested written confirmation of agreements and instructions developed in negotiations with the Department concerning the Work under contract. Agreements must be able to be quantified using existing contract procedures and will, in the vast majority of cases, not impact contract time and cost. When time and/or cost are impacted, they must be clearly spelled out in the COVI.

Requests for information (RFI) – Requests generated by either the Contractor or the Department that the other party supplies information to better understand or clarify a certain aspect of the Work.

Requests for owner action (ROA) – Requests when the Contractor asks that the Department take certain action(s) the Contractor feels is required for proper completion of a portion of the Work or project completion.

Contract change requests (CCR) - Request where the Contractor asks the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.

Requests for contractor action (RCA) – Request generated by the Department where the Department asks the Contractor to take certain action that is in the best interests of the project and/or is required for proper completion of a portion of the Work or for project completion.

Contract change directives (CCD) – Directive by the Department which instructs the Contractor to perform work beyond that specified or envisioned in the original contract and which may specify instructions, time, and cost(s) to make an equitable adjustment to the original contract.

Responsible Person – The individual in the normal or escalated resolution process, for either the Contractor or the Department, having the direct authority, responsibility and accountability to formulate and respond to each category of information request.

III. PROCESS FOR DECISION MAKING

Project teams composed on responsible individuals directly involved in the administration, prosecution, and inspection of the Work from the Contractor and the Department shall define and agree upon the field decision-making process during the pre-construction conference. This information relative to the process should be written down and distributed to all parties of the process once it is established. Where there are responsibility, authority or personnel changes associated with this process such changes shall be distributed to all affected parties as quickly as practicable after they are effective so as not to delay or impede this process.

The process for making field decisions with respect to the Work detailed in the contract basically requires the following steps:

1. The Contractor and the Engineer agree on the decision-making process, the identity, authority and accountability of the individuals involved and on the cycle times for response for each category of decision.
2. The party requiring the information generates the appropriate request documents, and calls for a decision from the individual who is accountable for the particular facet of the Work under consideration within the agreed period.
3. The responding party has an internal decision-making process that supports the individual who is accountable and provides the information required within the agreed period for each category of request.
4. The party receiving the decision has an internal process for accepting the decision or referring it for further action within an agreed period of time.

The process also requires that clear and well-understood mechanisms be in place to log and track requests, document the age and status of outstanding requests and actions to be taken on requests that have not been answered within the agreed period.

Both the Department and the Contractor shall agree on the following:

- The documentation and perhaps format to be developed for each category of information requested,
- The name (as opposed to organizational position) of all individuals with the responsibility, authority and accountability to formulate and respond to each category of information requested. The District Administrator (DA) or Chief Executive Officer (CEO) of the Contractor may delegate the responsibility and authority for formulating and responding to requests, however, the accountability for meeting the established response time(s) remains with the District Administrator and CEO.
- The cycle times for each stage in the decision-making process,
- The performance measures to be used to manage the process,
- The action to be taken if cycle times are not achieved and information is not provided in a timely manner.

The following general guideline and timeframe matrix will apply to the various requests for action. Again, please note these guidelines are general in scope and may not apply to specific contract timeframes for response identified within the requirements of the Contract documents. In such cases, specific contract requirements for information shall apply.

PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE CONTRACTOR

Process	Situation	Normal resolution process		Escalated process		Final resolution
		By	Within (calendar days)	By	Within	
Submittal	Where the Contractor requests the Department's review, acceptance or approval of shop drawings, materials data, test reports, project progress schedules, or other submittals required by standard Specifications or other contract language.	Department's Designated Project Manager	• Acknowledge: 3 days[1] • Accept or Return: 14 days • Final Determination\Approve: 30 days or as outlined in contract documents.	DA or their designee*	7 days	Submit ROA or CCR
Confirmation of Verbal Instruction (COVI)	Resolving routine field issues, within the framework of the Contract, in negotiation with Owner field personnel.	Department's Appropriate field personnel	• Confirmation: 1 day [2]	Submit RFI, ROA or CCR	7 days	(See process for RFI, ROA, or CCR)
Request for Information (RFI)	Requests the Department to supply information to better understand or clarify a certain aspect of the work.	Department's Designated Project Manager	• Action: 14 days (or appropriate Action Plan)	DA or their designee*	7 days	Submit ROA or CCR
Request for Owner Action (ROA)	Requests that the Department take certain action the Contractor feels is required for proper completion of a portion of the Work or project completion.	Department's Designated Project Manager	• Acknowledge: 3 days [1] • Action: 14 days (or appropriate Action Plan)	DA or their designee*	7 days	Submit CCR
Contract Change Request (CCR)	Requests the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.	Department's Designated Project Manager	• Acknowledge: 3 days [1] • Action: 30 days (45 days if federal oversight project)	DA or their designee*	7 days	Established dispute resolution and claims process

[1] Process initiated on the last business day of a week shall be acknowledged before 5 pm on the next VDOT business day.

[2] The absence of a written confirmation from the Owner to a Contractor's written request for confirmation of a verbal instruction shall constitute confirmation of the verbal instruction.

PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE OWNER

Process	Situation	Normal resolution process		Escalated process		Final resolution
		By	Within (calendar days)	By	Within	
1. RFI	Requests the Contractor to supply information to better understand or clarify a certain aspect of the work. (RFI)	Contractor's Project Superintendent	• Action: 14 days (or appropriate written Action Plan)	Contractor's Project Manager	7 days	Submit RCA or CCD
2. RCA	Requesting the Contractor take certain action(s) that is in the best interests of the project and/or is required for proper completion of a portion of the work or for project completion. (RCA)	Contractor's Project Superintendent	• Response or Action to safety and environmental issues: 1 day • Otherwise acknowledge: 3 days [1] • Action: 14 days (or appropriate Action Plan)	Contractor's Project Manager	7 days	Submit CCD
3. CCD	Instructs the Contractor to perform work beyond that specified or envisioned in the original contract and undertakes action(s) to make an equitable adjustment to the contract. (CCD)	Contractor's Project Superintendent	• Acknowledge: 3 days [1] • Action: 30 days	CEO or their designee**	7 days	Established dispute resolution and termination process

[1] Process initiated on the last business day of a week shall be acknowledged before 5 p m on next project business day.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
INFORMAL PARTNERING

January 14, 2008

I. DECLARATION AND DESCRIPTION

The Virginia Department of Transportation (VDOT) is firmly committed to the formation of a partnering relationship with the Contractor, all subcontractors, suppliers, FHWA representatives; where appropriate, other federal agencies, local government officials, utilities representatives, law enforcement and public safety officials, consultants, and other stakeholders to effectively and efficiently manage and complete each construction or maintenance contract to the mutual and individual benefits and goals of all parties. Partnering is an approach to fulfilling this commitment where all parties to the contract, as well as individuals and entities associated with or otherwise affected by the contract, willingly agree to dedicate themselves by working together as a team to fulfill and complete the construction or maintenance contract in cost effective ways while preserving the highest standards of safety and quality called for by the contract documents combined with the goals of on time/on budget completion. The approach must still allow for the fact that the members of the team share many common interests yet have differing authorities, interests, and objectives that must be accommodated for the project to be viewed as successful by all parties. It is recognized by VDOT that partnering is a relationship in which:

- Trust and open communications are encouraged and expected by all participants
- All parties move quickly to address and resolve issues at the lowest possible level by approaching problems from the perspectives and needs of all involved
- All parties have identified common goals and at the same time respect each other's individual goals and values
- Partners create an atmosphere conducive to cooperation and teamwork in finding better solutions to potential problems and issues at hand

II. INFORMAL PARTNERING STRUCTURE

It is the business intent of the Department that informal partnering will be required on this project, whereby the spirit and principles of partnering are practiced from onsite field personnel to executive level owners and employees. The VDOT Field Guide to Partnering available on the VDOT website http://www.virginiadot.org/business/resources/partnerfinalallowres.pdf will be the standard reference guide utilized to structure and guide partnering efforts. This guide will be systematically evaluated to incorporate better practices as our partnering efforts evolve. Of particular note is the need for effective and responsive communication between parties to the partnering relationship as emphasized by the Special Provision for Project Communication and Decision Making now included as standard provision in all contracts advertised by the Scheduling and Contract Division of VDOT.

Informal partnering need not require the services of a professional facilitator and may be conducted by the actual partnering participants themselves. Informal partnering, and more specifically the Partnering Charter, will not change the legal relationship of the parties to the Contract nor relieve either party from any of the terms of the Contract.

III. PROCEDURES

The following are general procedures for informal partnering and are not to be considered as inclusive or representative of procedural requirements for all projects. Participants shall consult

the VDOT Field Guide for Partnering for assistance in developing specific guidelines to those efforts required for their individual projects.

At least 5 days prior to or in connection with the preconstruction conference the Contractor shall attend a conference with the Engineer at which time he and the Engineer shall discuss the extent of the informal partnering efforts required for the project, how these ha~~v~~e been accommodated in the Contractor's bid and the identity of expectations and stakeholders associated with the project. Informal partnering efforts require the Department and the Contractor to mutually choose a single person from among their collective staffs, or a trained facilitator to be responsible for leading all parties through the VDOT Field Guide to Partnering and any subsequent partnering efforts.

Partnering Meetings During Project Construction

In informal partnering efforts the Contractor shall provide a location for regularly scheduled partnering meetings during the construction period. Such meetings will be scheduled as deemed necessary by either party. The Contractor and VDOT will require the attendance of their key decision makers, including subcontractors and suppliers. Both the Contractor and VDOT shall also encourage the attendance of affected utilities, concerned businesses, local government and civic leaders or officials, residents, and consultants, which may vary at different times during the life of the Contract The Department and the Contractor are to agree upon partnering invitees in advance of each meeting. Follow-up partnering workshops may be held throughout the duration of the project as deemed necessary by the Contractor and the Engineer.

IV. MEASUREMENT AND PAYMENT

Informal Partnering, because the extent to which certain partnering activities are pursed is at the Contractor's option, and may vary according to project complexity, work history between the parties, project duration, the Contractor's own unique methods, means, and schedule to execute and complete the work, etc.; will not be paid for as a separate bid item but the all costs associated with informal partnering efforts for the duration of the work shall be considered inclusive and incidental to the cost of other appropriate items.

S107E02-1010

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS CONTROL AREAS

August 12, 2010

VOC Emission Control Area - The Contractor is advised that this project may be located in a volatile organic compound (VOC) emissions control area identified in the State Air Control Board Regulations (9 VAC 5-20-206) and in Table 1 below. Therefore, the following limitations may apply:

- Open burning is prohibited during the months of May, June, July, August, and September in VOC Emissions Control areas
- Cutback asphalt is prohibited April through October except when use or application as a penetrating prime coat or tack is necessary in VOC Emissions Control areas

Table 1. Virginia Department of Environmental Quality Volatile Organic Compound (VOC) Emissions Control Areas*

VOC Emissions Control Area	VDOT District	Jurisdiction
Northern Virginia	NOVA	Alexandria City Arlington County Fairfax County Fairfax City Falls Church City Loudoun County Manassas City Manassas Park City Prince William County
Northern Virginia	Fredericksburg	Stafford County
Fredericksburg	Fredericksburg	Spotsylvania County Fredericksburg City
Hampton Roads	Fredericksburg	Gloucester County
Hampton Roads	Hampton Roads	Chesapeake City Hampton City Isle of Wight County James City County Newport News City Norfolk City Poquoson City Portsmouth City Suffolk City Virginia Beach City Williamsburg City York County

Richmond	Richmond	Charles City County Chesterfield County Colonial Heights City Hanover County Henrico County Hopewell City Petersburg City Prince George County Richmond City
Western Virginia	Staunton	Frederick County Winchester City
Western Virginia	Salem	Roanoke County Botetourt County Roanoke City Salem City

* Regulations for the Control and Abatement of Air Pollution (9 VAC 5-20-206)

See the Virginia Code 9 VAC 5-40, Article 39 (Emission Standards for Asphalt Paving Operations) and 9 VAC 5-130 (Regulation for Open Burning) for further clarification. In addition to the above requirements, the Contractor's attention is directed to the requirements of Section 107.16 of the Specifications, because other air pollution requirements may also apply.

S108M00-0808

VIRGINIA DEPARTMENT OF TRANSPORATION
SPECIAL PROVISION FOR
SCHEDULE OF OPERATIONS FOR CATEGORY M PROJECTS

May 12, 2008

Section 103.06(e) Progress Schedule of the Specifications is deleted and replaced by this provision.

Section 108.03 Progress Schedule of the Specifications is deleted and replaced by this provision.

General Requirements – The Contractor shall plan and schedule the work and shall submit his overall work plan in the form of a written Schedule of Operations as described herein, for the Engineer's review and acceptance. The accepted Schedule of Operations will be used by the Engineer for planning and coordination of the Department activities, resources, and expenditures.

When preparing the Schedule of Operations, the Contractor shall consider all known constraints and restrictions such as holidays, seasonal, weather, traffic, utility, railroad, right-of-way, environmental, permits, or other known or specified limitations to the work.

At the Pre-Construction Conference the Contractor shall be prepared to discuss his planned or contemplated operations relative to the contract requirements and this special provision.

Delays resulting from the Contractor's failure to provide the Schedule of Operations will not be considered just cause for extension of the contract time limit or for additional compensation.

Schedule of Operations – The Contractor shall submit to the Engineer three (3) copies of the written Schedule of Operations at least seven (7) calendar days prior to beginning work. The Schedule of Operations shall represent the Contractor's overall work plan to accomplish the entire scope of work in accordance with the requirements of the Contract. The Schedule of Operations shall include all work including, as applicable, the work to be performed by sub-contractors, the Department, or others. The Schedule of Operations submittal shall consist of a written Narrative to:

(a) Describe the Contractor's proposed general sequence to accomplish the work;

(b) Indicate the general schedule of work to be completed each month in terms of the major operations, routes, or segments of work as delineated in the contract documents or in the absence of such delineations, as agreed to by the Contractor and the Engineer. A bar-chart schedule may be substituted at the Contractor's option.

Two Week Look-ahead (TWLA) Schedule of Operations – At least seven (7) calendar days prior to beginning work, the Contractor shall submit to the Engineer, an initial written TWLA Schedule of Operations for any work planned for the first two weeks. Every week thereafter, on a day agreed to by the Contractor and the Engineer, the Contractor shall submit to the Engineer, a written TWLA Schedule of Operations for the following two-week period. The TWLA schedule shall provide a detailed list of operations to indicate the type of operation, location(s) of the work, proposed working days and hours, and the start and finish dates for any work planned, started, in progress, or scheduled for completion during the two-week period. The TWLA Schedule of Operations shall also indicate any critical stage(s) of work requiring VDOT oversight or inspection. The Contractor shall submit three (3) copies of the TWLA Schedule of Operations to the Engineer in any legible format.

The Contractor may revise his TWLA Schedule of Operations at his discretion. However, the Contractor shall notify the Engineer at least forty-eight (48) working hours in advance of any changes in the Contractor's planned operations or critical stage work requiring Department oversight or inspection. In the

event of extenuating circumstances deemed by the Engineer to be beyond the Contractor's control, the Engineer may grant verbal concurrence of changes in the Contractor's planned operations with less advance notice, as the need arises.

Revised Schedule of Operations – The Contractor may revise his overall plan of operations at any time, however, the Contractor shall submit a Revised Schedule of Operations to reflect any changes in his overall sequence of operations or general schedule. The Contractor may be required, as determined by the Engineer to submit a Revised Schedule of Operations. Circumstances that may prompt the Engineer's decision to request a Revised Schedule of Operations may include deviations from the overall sequence of operations or if the actual progress of work varies by one month or more from the currently accepted Schedule of Operations.

When required by the Engineer, the Revised Schedule of Operations shall be submitted within seven (7) calendar days of receipt of the Engineer's written request. The Revised Schedule of Operations shall be submitted in the form of the Schedule of Operations as defined herein, to reflect the changes in the Contractor's overall work plan. The accepted Revised Schedule of Operations will replace any previously accepted Schedule of Operations for the remainder of the work.

Review and Acceptance – The Engineer will review the Initial or subsequent Revised Schedule of Operations submittals for acceptance within seven (7) calendar days of receipt of the Contractor's complete submittal. Review and acceptance by the Engineer will be based on conformance with the requirements of this provision and the Contract.

Review and acceptance by the Engineer will not constitute a waiver of any contract requirements and will in no way assign responsibilities of the work plan, scheduling assumptions, and validity of the work plan or schedule to the Department. Failure of the Contractor to include in the Schedule of Operations any element of work required by the Contract for timely completion of the Contract shall not excuse the Contractor from his contractual obligations.

Measurement and Payment – Category M Schedule of Operations including the Initial and any subsequent Revised Schedule of Operations requested by the Engineer or originated by the Contractor, will not be measured or paid for separately. All associated costs to prepare, update, revise, and/or furnish the Schedule of Operations for Category M projects in accordance with the requirements herein shall be considered incidental to the work.

S102CF1-0309

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
USE OF DOMESTIC MATERIAL

February 26, 2009

SECTION 102.05 PREPARATION OF BID of the Specifications is amended to include the following:

In accordance with the provisions of Section 635.410(b) of Title 23 CFR, hereinafter referred to as "Buy America", except as otherwise specified, all iron and steel products (including miscellaneous steel items such as fasteners, nuts, bolts and washers) to be permanently incorporated for use on federal aid projects shall be produced in the United States of America regardless of the percentage they exist in the manufactured product or final form they take. Therefore, "Domestically produced in the United States of America" means all manufacturing processes must occur in the United States of America, to mean, in one of the 50 States, the District of Columbia, Puerto Rico or in the territories and possessions of the United States. Manufacturing processes are defined as any process which alters or modifies the chemical content, physical size or shape or final finish of iron or steel material) such as rolling, extruding, bending, machining, fabrication, grinding, drilling, finishing, or coating whereby a raw material or a reduced iron ore material is changed, altered or transformed into a steel or iron item or product which, because of the process, is different from the original material. For the purposes of satisfying this requirement "coating" is defined as the application of epoxy, galvanizing, painting or any other such process that protects or enhances the value of the material. Materials used in the coating process need not be domestic materials.

For the purposes herein the manufacturing process is considered complete when the resultant product is ready for use as an item in the project (e.g. fencing, posts, girders, pipe, manhole covers, etc.) or is incorporated as a component of a more complex product by means of further manufacturing. Final assembly of a product may occur outside of the United States of America provided no further manufacturing process takes place.

Raw materials such as iron ore, pig iron, processed, pelletized and reduced iron ore, waste products (including scrap, that is, steel or iron no longer useful in its present form from old automobiles, machinery, pipe, railroad rail, or the like and steel trimmings from mills or product manufacturing) and other raw materials used in the production of steel and\or iron products may, however, be imported. Extracting, handling, or crushing the raw materials which are inherent to the transporting the materials for later use in the manufacturing process are exempt from Buy America. The use of foreign source steel or iron billet is not acceptable under the provisions of Buy America. For the purposes of this provision all steel or iron material not meeting the criteria as domestically produced in the United States of America will be considered as "foreign" material. All iron and steel items will be classified hereinafter as "domestic" or "foreign", identified by and subject to the provisions herein.

Domestically produced iron or steel ingots or billets shipped outside the United States of America for any manufacturing process and returned for permanent use in a project would not comply with "Buy America" requirements.

Buy America provisions do not apply to iron or steel products used temporarily in the construction of a project such as temporary sheet piling, temporary bridges, steel scaffolding, falsework or such temporary material or product or material that remains in place for the Contractor's convenience.

Section 635.410(b) of Title 23 CFR permits a minimal amount of steel or iron material to be incorporated in the permanent work on a federal-aid contract. The cost of such materials or products must not exceed one-tenth of one percent of the contract amount or $2500, whichever is greater. The cost of the foreign iron or steel material is defined as its monetary value delivered to the job site

and supported by invoices or bill of sale to the Contractor. This delivered to site cost must include transportation, assembly, installation and testing.

In the event the total cost of all "foreign" iron and steel product or material does not exceed one-tenth of one percent of the total contract cost or $2,500, whichever is greater, the use of such material meeting the limitations herein will not be restricted by the domestic requirements herein. However, by signing the bid, the Bidder certifies that such cost does not exceed the limits established herein.

Waivers:

With prior concurrence from Federal Highway Administration (FHWA) headquarters, the Federal Highway Division Administrator may grant a waiver to specific projects provided it can be demonstrated:

1 that the use of domestic steel or iron materials would be inconsistent with the public interest; or

2. materials or products requested for use are not produced in the United States in sufficient or reasonably available quantities and are of satisfactory quality for use in the permanent work.

The waiver request shall be submitted with supportive information to include:

1. Project number\description, project cost, waiver item, item cost, country of origin for the product, reason for the waiver, and

2. Analysis of redesign of the project using alternative or approved equal domestic products.

In order to grant such a waiver the request for the waiver must be published in the Federal Register for a period not less than 15 days or greater than 60 days prior to waiving such requirement. An initial 15 day comment period to the waiver will be available to the public by means of the FHWA website: http://www.fhwa.dot.gov/construction/contracts/waivers.cfm. Following that initial 15 day period of review and comment the request for waiver will be published by the FHWA in the Federal Register. The effective date of the FHWA finding, either to approve or deny the waiver request, will be 15 days following publication in the Federal Register.

Only the FHWA Administrator may grant nationwide waivers which still are subject to the public rulemaking and review process.

Alternative Bidding Procedures:

An alternative bidding procedure may be employed to justify the use of foreign iron and\or steel. To qualify under this procedure the total project is bid using two alternatives, one based on the use of domestic products and the other, the use of corresponding foreign source steel and\or iron materials.

In accordance with the provisions of Section 103.02 the Contract will be awarded to the lowest responsive and responsible bidder who submits the lowest total bid based on furnishing domestic iron or steel unless such total exceeds the lowest total bid based on furnishing foreign iron and\or steel by more than 25 percent, in which case the award will be made to the lowest responsive and responsible bidder furnishing foreign iron and\or steel based upon furnishing verifiable supportive data. The bidder shall submit a bid based on permanently incorporating only domestic iron and\or steel in the construction of the project. The bidder may also submit a bid for the same proposed contract based on being allowed to permanently incorporate corresponding foreign iron and\or steel materials meeting the other contract requirements into the work on the contract. If he chooses to submit such a bid, that alternate bid shall clearly indicate which foreign iron and\or steel items will be permanently installed in the work as well as contain prices for all other items listed in the corresponding domestic proposal to complete a total “Foreign” bid.

In the event the contract is awarded to the bidder furnishing foreign iron and\or steel materials or items the provision for price adjustment of steel items will be permitted, however, price fluctuations shall use the U.S. index as stated in the Special Provision for Price Adjustment For Steel. The Contractor must indicate which corresponding eligible steel items he chooses price adjustment to apply. In the event the contract is awarded to a bidder furnishing foreign iron and\or steel items and during the life of that contract the Contractor discovers he can not furnish foreign iron and\or steel material as originally anticipated and agreed upon, he shall be responsible to honor the total bid price and furnish such iron and\or steel materials meeting the contract requirements from other sources as necessary to complete the work.

In the event the Contractor proposes to furnish "foreign" iron and steel and can verify a savings in excess of 25 percent of the overall project cost if bid using domestic materials, the Contractor shall submit a second complete paper bid proposal clearly marked “Foreign” including Form C-7 and supportive data supplement on all sheets. Supportive data shall list, but not be limited to, origin of material, best price offer, quantity and complete description of material, mill analysis, evidence or certification of conformance to contract requirements, etc. The “Foreign” bid shall be completed using the best price offer for each corresponding bid item supplying foreign material in the alternative bid and submit the same with the Contractor’s “Domestic” bid. The Contractor shall write the word “Foreign” by the bid total shown on Form C-7 as well as last page of Schedule of Items showing the total bid amount. The bidder shall also contact the State Contract Engineer to inform him that he is also submitting an alternate “Foreign” paper bid.

The information listed on the supportive data sheet(s) will be used to provide the basis for verification of the required cost savings. In the event comparison of the prices given, or corrected as provided in Section 103.01 of the Specifications, shows that use of "foreign" iron and steel items does not represent a cost savings exceeding the aforementioned 25 percent, "domestic" iron and\or steel and prices given there for shall be used and the "100 percent Domestic Items Total" shall be the Contractor's bid.

Certification of Compliance:

Where domestic material is supplied, prior to final payment the Contractor shall furnish to the Department a certificate of compliance (such as may be furnished by steel mill test reports) that all steel and\or iron products supplied to the project except as may be permitted (one-tenth of one percent of the total contract cost or $2,500, whichever is greater) and permanently incorporated into the work satisfies the domestic requirements herein. This certification shall contain a definitive statement about the origin of all products covered under the provisions of Buy America as stated herein.

In lieu of the Contractor providing personal certification, the Contractor may furnish a stepped certification in which each handler of the product, such as supplier, fabricator, manufacturer, processor, etc. furnishes an individual certification that their step in the process was domestically performed.

S109F00-0708

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
OPTIONAL ADJUSTMENT FOR FUEL

December 20, 2005c
Reissued July 2008c

The Department will adjust monthly progress payments up or down as appropriate for cost changes in fuel used on specific items of work identified in this provision. The Department will provide a master listing of standard bid items eligible for fuel adjustment on its website.

Included with this proposal is a listing of standard bid items the Department has identified as eligible for fuel adjustment on this project(s) as well as the respective fuel factors per pay unit for those items. Only items on this listing will be eligible for adjustment. The fuel usage factor for each item is considered inclusive of all fuel usage. Generally, non-standard pay items are not eligible for fuel adjustment.

The listing of eligible items applicable to this particular project is shown on Form C-21B "Bid Items Eligible for Fuel Adjustment" included with the bidding documents. The Bidder may choose to have fuel adjustment applied to any or all eligible items on this project's listing by designating the items for which the fuel adjustment will apply. The Bidder's selection of items for fuel adjustment may not be changed once he has submitted Form C-21B to the Department.

In order to be eligible for fuel adjustment under this provision, the apparent lowest responsive and responsible Bidder shall clearly identify on Form C-21B those pay items he chooses to have fuel adjustment applied on. Within 21 days after the receipt of bids the apparent successful Bidder shall submit his designated items on Form C-21B to the Contract Engineer. Items the successful Bidder chooses for fuel adjustment must be designated by writing the word "Yes" in the column titled "Option" by each bid item chosen for fuel adjustment. The successful Bidder's designations on Form C-21B must be written in ink or typed, and signed by this Bidder to be considered complete. Items not properly designated or left blank on the Bidder's C-21B "Bid Items Eligible for Fuel Adjustment" form will automatically not be considered for adjustment. If the apparent successful Bidder fails to return his Form C-21B within the timeframe specified, items will not be eligible for fuel adjustment on this project.

The monthly index price to be used in the administration of this provision will be calculated by the Department from the Diesel fuel prices published by the U. S. Department of Energy, Energy Information Administration on highway diesel prices, for the Lower Atlantic region. The monthly index price will be the price for diesel fuel calculated by averaging each of the weekly posted prices for that particular month.

For the purposes of this provision, the base index price will be calculated using the data from the month preceding the receipt of bids. The base index price will be posted by the Department at the beginning of the month for all bids received during that month.

The current index price will be posted by the Department and will be calculated using the data from the month preceding the particular estimate being vouchered for payment.

The current monthly quantity for eligible items of work selected by the Contractor for fuel adjustment will be multiplied by the appropriate fuel factor to determine the gallons of fuel to be cost adjusted. The amount of adjustment per gallon will be the net difference between the current index price and the base index price. Computation for adjustment will be made as follows:

$$S = (E - B)\ QF$$

Where; S = Monetary amount of the adjustment (plus or minus)
B = Base index price
E = Current index price
Q = Quantity of individual units of work
F = Appropriate fuel factor

Adjustments will not be made for work performed beyond the original contract time limit unless the original time limit has been changed by an executed Work Order.

If new pay items are added to this contract by Work Order and they are listed on Department's master listing of eligible items, the Work Order must indicate which of these individual items will be fuel adjusted; otherwise, those items will not be fuel adjusted. If applicable, designating which new pay items will be added for fuel adjustment must be determined during development of the Work Order and clearly shown on Form C-10 Work Order. The Base Index price on any new eligible pay items added by Work Order will be the Base Index price posted for the month in which bids were received for that particular project. The Current Index price for any new eligible pay items added by Work Order will be the Index price posted for the month preceding the estimate on which the Work Order is paid.

When quantities differ between the last monthly estimate prepared upon final acceptance and the final estimate, adjustment will be made using the appropriate current index for the period in which that specific item of work was last performed.

In the event any of the base fuel prices in this contract increase more than 100 percent (i.e. fuel prices double), the Engineer will review each affected item of work and give the Contractor written notice if work is to stop on any affected item of work. The Department reserves the right to reduce, eliminate or renegotiate the unit price for remaining portions of affected items of work.

Any amounts resulting from fuel adjustment will not be included in the total cost of work for determination of progress or for extension of contract time.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
NO FUEL ADJUSTMENT ELIGIBILITY FOR SPECIFIC SCHEDULE ITEMS

September 3, 2008

If the fuel adjustment form(s), as required in the Special Provision for **Optional Adjustment for Fuel**, is not included in the Contract for a specific schedule, the items in that schedule are **not** eligible for fuel adjustment.

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S109G03-1109

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
ASPHALT MATERIAL PRICE ADJUSTMENT

July 30, 2008cc

All asphalt material contained in the attached master listing of eligible bid items and designated by pay items in the contract will be price adjusted in accordance with the provisions as set forth herein. Other items will not be adjusted, except as otherwise specified in the contract. If new pay items which contain asphalt material are established by Work Order, they will not be subject to Price Adjustment unless specifically designated in the Work Order to be subject to Price Adjustment.

Each month, the Department will publish an average state-wide PG 64-22 f.o.b. price per ton developed from the average terminal prices provided to the Department from suppliers of asphalt cement to contractors doing work in Virginia. The Department will collect terminal prices from approximately 12 terminals each month. These prices will be received once each month from suppliers on or about the last weekday of the month. The high and low prices will be eliminated and the remaining values averaged to establish the average statewide price for the following month. That monthly state-wide average price will be posted on the Scheduling and Contract Division website on or about the first weekday of the following month.

This monthly statewide average price will be the Base Index for all contracts on which bids are received during the calendar month of its posting and will be the Current Index for all asphalt placed during the calendar month of its posting. In the event an index changes radically from the apparent trend, as determined by the Engineer, the Department may establish an index which it determines to best reflect the trend.

The amount of adjustment applied will be based on the difference between the contract Base Index and the Current Index for the applicable calendar month during which the work is performed. Adjustment of any asphalt material item designated as a price adjustment item which does not contain PG 64-22, except PG 76-22, will be based on the indexes for PG 64-22. The quantity of asphalt cement for asphalt concrete pavement to which adjustment will be applied will be the quantity based on the percent of asphalt cement shown on the appropriate approved job mix formula.

The quantity of asphalt emulsion for surface treatments to which adjustment will be applied will be the quantity based on 65 percent residual asphalt.

Price adjustment will be shown as a separate entry on the monthly progress estimate; however, such adjustment will not be included in the total cost of the work for progress determination or for extension of contract time.

Any apparent attempt to unbalance bids in favor of items subject to price adjustment or failure to submit required cost and price data as noted hereinbefore may result in rejection of the bid proposal.

VIRGINIA DEPARTMENT OF TRANSPORTATION

MASTER LISTING OF

ASPHALT MATERIAL ITEMS ELIGIBLE FOR PRICE ADJUSTMENT

(10-27-09)

ITEM	DESCRIPTION	UNITS	SPECIFICATION
10062	Asphalt-Stab. Open-Graded Material	Ton	313
10416	Liquid Asphalt	Gal	311 312
10420	Blotted Seal Coat Ty. B	Sy	ATTD
10422	Blotted Seal Coat Ty. C	Sy	ATTD
10423	Blotted Seal Coat Ty. C-1	Sy	ATTD
10424	Blotted Seal Coat Ty. D	Sy	ATTD
10598	Ns Asphalt Concrete	Ton	315
10606	Asphalt Concrete Ty. SM-9.5	Ton	315
10607	Asphalt Concrete Ty. SM-12.5A	Ton	315
10608	Asphalt Concrete Ty. SM-12.5D	Ton	315
10609	Asphalt Concrete Ty. SM-12.5E (76-22)	Ton	315
10610	Asphalt Concrete Ty. IM-19.0A	Ton	315
10611	Asphalt Concrete Ty. IM-19.0D	Ton	315
10612	Asphalt Conc. Base Cr. Ty. BM-25.0	Ton	315
10613	Asphalt Concrete Ty. BM-37.5	Ton	315
10635	Asphalt Concrete Ty. SM-9.5A	Ton	315
10636	Asphalt Concrete Ty. SM-9.5D	Ton	315
10637	Asphalt Concrete Ty. SM-9.5E (76-22)	Ton	315
10639	Asphalt Concrete Ty. SM-19.0	Ton	315
10642	Asphalt Concrete Ty. BM-25.0A	Ton	315
10643	Asphalt Concrete Ty. BM-25.0D	Ton	315
10650	Stone Matrix Asphalt SMA-9.5(70-22)	Ton	317
10651	Stone Matrix Asphalt SMA-9.5(76-22)	Ton	317
10652	Stone Matrix Asphalt SMA-12.5(70-22)	Ton	317
10653	Stone Matrix Asphalt SMA-12.5(76-22)	Ton	317
10654	Stone Matrix Asphalt SMA-19.0(70-22)	Ton	317
10655	Stone Matrix Asphalt SMA-19.0(76-22)	Ton	317
10701	Liquid Asphalt Coating	Sy	ATTD
12505	Asphalt Concrete Curb Backup Material	Ton	315
13240	Asphalt Concrete Sidewalk	Ton	504
16110	Emul. Asph. Slurry Seal Type A	Sy	ATTD
16120	Emul. Asph. Slurry Seal Type B	Sy	ATTD
16130	Emul. Asph. Slurry Seal Type C	Sy	ATTD
16144	Latex Mod. Emul. Treat. Type B	Ton	ATTD
16145	Latex Mod. Emul. Treat. Type C	Ton	ATTD
16146	Latex Mod. Emul. Treat. Rutfilling	Ton	ATTD
16161	Modified Single Seal	Sy	ATTD
16162	Modified Double Seal	Sy	ATTD
16249	Nontracking Tack Coat	Gal.	ATTD
16250	Liquid Asphalt Matl. CMS-2 (Mod)	Gal	ATTD
16251	Liquid Asphalt Matl. CMS-2	Gal	ATTD
16252	Liquid Asphalt Matl. CRS-2	Gal	ATTD
16253	Liquid Asphalt Matl. CRS-2H	Gal.	ATTD.

16254	Liquid Asphalt Matl. RC-250	Gal	ATTD
16256	Liquid Asphalt Matl. RC-800	Gal	ATTD
16257	Ns Liquid Asphalt Matl.	Gal	ATTD
16260	Liquid Asphalt Matl. CRS-2L	Gal	ATTD
16325	NS Asphalt Concrete	Ton	N/A
16330	Asphalt Concrete Ty. SM-9.0A	Ton	315
16335	Asphalt Concrete Ty. SM-9.5A	Ton	315
16337	Asph. Conc. Ty. SM-9.5ASL (Spot Level)	Ton	315
16340	Asphalt Concrete Ty. SM-9.5D	Ton	315
16342	Asph. Conc. Ty. SM-9.5DSL (Spot Level)	Ton	315
16345	Asphalt Concrete Ty. SM-9.5E (76-22)	Ton	315
16350	Asphalt Concrete Ty. SM-12.5A	Ton	315
16352	Asph. Con. Ty. SM-12.5ASL (Spot Level)	Ton	315
16355	Asphalt Concrete Ty. SM-12.5D	Ton	315
16357	Asph. Con. Ty. SM-12.5DSL (Spot Level)	Ton	315
16360	Asphalt Concrete Ty. SM-12.5E (76-22)	Ton	315
16365	Asphalt Concrete Ty. IM-19.0A	Ton	315
16370	Asphalt Concrete Ty. IM-19.0D	Ton	315
16373	Asphalt Concrete Ty. IM-19.0A (T)	Ton	315
16374	Asphalt Concrete Ty. IM-19.0D (T)	Ton	315
16377	Asphalt Concrete Ty. BM-37.5	Ton	315
16379	Asphalt Concrete Ty. IM-19.0T	Ton	315
16390	Asphalt Concrete Ty. BM-25.0A	Ton	315
16392	Asphalt Concrete Ty. BM-25.0D	Ton	315
16395	Asphalt Concrete Ty. BM-25.0A (T)	Ton	315
16397	Asphalt Concrete Ty. BM-25.0D (T)	Ton	315
16400	Stone Matrix Asphalt SMA-9.5(70-22)	Ton	ATTD
16401	Stone Matrix Asphalt SMA-9.5(76-22)	Ton	ATTD
16402	Stone Matrix Asphalt SMA-12.5(70-22)	Ton	ATTD
16403	Stone Matrix Asphalt SMA-12.5(76-22)	Ton	ATTD
16404	Stone Matrix Asphalt SMA-19.0(70-22)	Ton	ATTD
16405	Stone Matrix Asphalt SMA-19.0(76-22)	Ton	ATTD
16490	Hot Mix Asphalt Treatment	Ton	ATTD
16500	Surf.Preparation & Restoration Type I	Ton	ATTD
16502	Surf.Preparation & Restoration Type II	Ton	ATTD
16504	Surf.Preparation & Restoration Type III	Ton	ATTD
67201	NS Asphalt Concrete Overlay	Ton	315
67210	NS Asphalt Concrete	Ton	315
68240	NS Asphalt Concrete	Ton	315

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
NO STEEL PRICE ADJUSTMENT ELIGIBILITY FOR SPECIFIC SCHEDULE ITEMS

December 10, 2009

If the steel price adjustment form(s), as required in the special provision for **Price Adjustment For Steel**, is not included in the Contract for a specific schedule, the items in that schedule are **not** eligible for steel price adjustment.

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S109D01-0609

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PRICE ADJUSTMENT FOR STEEL

February 6, 2009

The Department will adjust monthly progress payments up or down as appropriate for cost changes in steel used on specific items of work identified in the contract in accordance with this provision. Provided within this Special Provision is a master listing of standard bid items the Department has determined are eligible for steel price adjustment.

Included with the bidding proposal is an automatically generated *project-specific* listing of *standard* bid items the Department has identified as eligible for steel price adjustment. Only items on this listing will be eligible for steel price adjustment. Generally, *non-standard* pay items will not be eligible for steel price adjustment unless such steel items are project-specific modifications of items normally eligible, are clearly and specifically identified by a separate and distinct steel pay item and the quantities present on the project constitute major items of the work, in which case such items may be addressed by project specific provisions and their related pay items designated in the bid proposal as being eligible. The listing of items eligible for steel price adjustment for a particular project will be shown on Form C-21C "Bid Items Eligible for Steel Price Adjustment" and included with the bidding documents. The Bidder may choose to have steel price adjustment applied to any, all or none of the eligible items shown on Form C-21C. The Bidder's selection of items for steel price adjustment or non selection (non participation) may not be changed once he has submitted Form C-21C to the Department.

In order to confirm eligibility for steel price adjustment under this provision, within 15 calendar days after the date of the Contract Award letter, the Contractor shall submit to the State Contract Engineer on Form C-21C those pay items he chooses to have steel price adjustment applied on. Items the Contractor chooses for steel price adjustment must be designated by writing the word "Yes" in the column titled "Option" by each bid item chosen for adjustment. The Contractor's designations on Form C-21C must be written in ink or typed, and signed by the Contractor to be considered complete. Items not properly designated, or designated with "No" or left blank on the Contractor's C-21C "Bid Items Eligible for Steel Price Adjustment" form will automatically not be considered for adjustment. If the Contractor fails to return his Form C-21C within the timeframe specified, no steel items will be eligible for steel price adjustment on the designated project.

Please note: Inventoried materials from the listing of eligible items are specifically excluded for consideration. Additionally, items from the listing of eligible items for which the Contractor has requested payment as Material on Hand in accordance with the provisions of Section 109.09 are specifically excluded for consideration past the delivery date to the fabricator. This provision also does not allow for price adjustment for embedded steel where the steel item is a component of the finished bid item and there is no separate or distinct payment for the steel item or for steel used for pre-tensioned or post-tensioned precast components where furnishing steel is included in the unit price of the finished bid item.

The requirements of this provision shall apply only to material cost changes that occur between the date of the receipt of bids by the Department and the date the material is shipped to the fabricator. In addition to the requirements listed above, to be eligible for this price adjustment, the Contractor, subcontractor and/or supplier is required to place his purchase order for the steel items in his contract he has designated for price adjustment within 30 calendar days after the date of execution of this contract with the Department so as to better ensure reduced cost for steel used in such items. The timeliness of his response is also to insure the receipt of such items in a timely manner that shall not adversely affect his progress schedule or contract completion date. Further, in order for steel items to be eligible for adjustment, once shipped to the fabricator, the items shall be specifically stored, labeled, or tagged, recognizable by color marking, and identifiable by project for inspection and audit verification.

Within 14 days after the date of contract execution, the Contractor shall submit to the appropriate District Construction Engineer material price quotes, bid papers, or other similar type of documentation satisfactory to the Department for the bid items listed in the Contract for which it is requesting a steel price adjustment. This documentation shall support the completion of the form establishing the average price per pound for the eligible steel bid item. The Contractor must use the format as shown with this provision; no other format for presenting this information will be permitted. The Contractor shall certify that all items of documentation are original and were used in the computation of the amount bid for the represented eligible pay items for the month bids were opened. This documentation shall support the base line material price ("Base Price") of the steel item only. No adjustment will be made for changes in other components of the contract unit bid price, including, but not limited to, fabrication, shipping, storage, handling, and erection.

Failure to submit specifically required information such as purchase order, price data, bill of lading, material information or other requested information as noted herein will result in the Contractor not being eligible for price adjustment of steel items.

Price adjustment of each qualifying item under consideration will be subject to the following condition:

> There is an increase or decrease in the cost of eligible steel materials in excess of 10 percent up to a maximum of 60 percent from the Base Price when compared with the latest published price index ("Price Index") in effect at the time material is shipped to the fabricator.

The Price Index the Department is using is based on The U.S. Department of Labor, Bureau of Labor Statistics, Producers Price Index (PPI) which measures the average price change over time of the specific steel eligible item from the perspective of the seller of goods. The specific Producers Price Index (PPI) to be used to adjust the price for the eligible VDOT steel items is shown in the table below. **Please note**: The Producers Price Index (PPI) is subject to revision 4 months after original publication, therefore, price adjustments and payments will not be made until the index numbers are finalized.

The table attached to the end of this provision indicates the Producers Price Index (PPI) steel category index items and the corresponding I.D. numbers to which VDOT items will be compared.

The price adjustment will be determined by computing the percentage of change in index value beyond 10 percent above or below the index on the bid date to the index value on the date the steel material is shipped to the fabricator (Please see included sample examples). Weights and date of shipment must be documented by a bill of lading provided to the Department. The final price adjustment dollar value will be determined by multiplying this percent increase or decrease in the index (after 10%) by the represented quantity of steel shipped, by the Base Price per pound subject to the limitations herein.

Price increase/decrease will be computed as follows:

$$A = B \times P \times Q$$

Where;

- A = Steel price adjustment in lump sum dollars
- B = Average weighted price of steel submitted with bid on project in $ per pound
- P = Adjusted percentage change in PPI average from shipping date to bid date minus 10% (0.10) threshold
- Q = Total quantity of steel in pounds shipped to fabricator for specific project

Delays to the work caused by steel shortages may be justification for a contract time extension but will not constitute grounds for claims for standby equipment, extended office overhead, or other costs associated with such delays.

The need for application of the adjustments herein to extra work will be determined by the Engineer on an individual basis and, if appropriate, will be specified on the Work Order.

This price adjustment is capped at 60 percent. This means the maximum “P” value for increase or decrease that can be used in the above equation is 50% (60%-10% threshold).

Calculations for price adjustment shall be shown separate from the monthly progress estimate and will not be included in the total cost of work for determination of progress or for extension of contract time.

Any apparent attempt to unbalance bids in favor of items subject to price adjustment may result in rejection of the bid proposal.

20-Jan-05

Sample Form to be turned in for Steel Price Adjustment Provision
(All prices to be supported by project-specific quotes)

BID DATE 28-Apr-04

Bid Item 61720 High Strength Structural Steel

Supplier	Description of material	Unit price f.o.b supplier $/lbs	Quantity In lbs.	Price Extension	Date of Quote
XYZ mill	Structural beams Various sizes (see quote)	$0.28	1,200,000	$336,000.00	21-Apr-04
ABC distributing	Various channel & angle shapes (see quote)	$0.32	35,000	$11,200.00	20-Apr-04
		Total	1,235,000	$347,200.00	
		Average weighted price =		$0.2816	

Note: All prices are to include any surcharges on materials quoted as if they are shipped in the month the bid is submitted. Vendors must include this surcharge along with their base price on their quotes.

v

20-Jan-05

Sample Calculation of a Price Adjustment (increase)

Project bid on April 28, 2004.

Project has 450,000 lb. of structural steel.

Orders placed in timely manner and according to contract.

Contractor's *f.o.b. supplier price for the structural steel in bid is $0.2816 per pound. *free on board

Adjusted** BLS Producers Price Index (PPI) most recently published average at time of bid is 139.6.
** final change
after 4 months

All steel shipped to fabricator in same month, October 2004.

Adjusted BLS Producers Price Index (PPI) most recently published average for month of October is 161.1

Adjustment formula is as follows:

A = B X P X Q

Where;
- A = Steel price adjustment in lump sum dollars
- B = Average weighted price of steel submitted with bid on project in $ per pound
- P = Adjusted percentage change in PPI average from shipping date to bid date minus 10% (0.10) threshold
- Q = Total quantity of steel shipped to fabricator in October 2004 for this project in pounds

B = $0.2816

P = (161.1- 139.6)/139.6 – 0.10 = 0.054

Q = 450,000 lb.

A = 0.2816 x 0.054 x 450,000

A = $6,842.88 pay adjustment to Contractor

20-Jan-05

Sample Calculation of a Price Adjustment (decrease)

Project bid on April 28, 2004.

Project has 450,000 lb. of structural steel.

Orders placed in timely manner and according to contract.

Contractor's *f.o.b. supplier price for structural steel in bid is $0.2816 per pound. *free on board

Adjusted BLS Producers Price Index (PPI) most recently published average at time of bid is 156.6.

All steel shipped to fabricator in same month, October 2004.

Adjusted BLS Producers Price Index (PPI) most recently published average for month of October is 136.3

Adjustment formula is as follows:

A = B X P X Q

Where;
- A = Steel price adjustment in lump sum dollars
- B = Average weighted price of steel submitted with bid on project in $ per pound
- P = Adjusted percentage change in PPI average from shipping date to bid date minus 10% (0.10) threshold
- Q = Total quantity of steel shipped to fabricator in October 2004 for this project in pounds

B = $0.2816

P = (156.6 – 136.3)/156.6 – 0.10 = 0.030

Q = 450,000 lb.

A = 0.2816 x 0.030 x 450,000

A = $3,801.60 credit to Department

MASTER LISTING

STANDARD BID ITEMS ELIGIBLE FOR STEEL PRICE ADJUSTMENT

Sept. 24, 2008	rev # 1added 4 corrosion resistant re-bar items.	
Dec. 4, 2008	rev # 2 deleted item 68138 straighten structural steel	
January 14, 2009	rev # 3 identified BLS WPU used in $ adjustment	**BLS Series I. D.**
March 18, 2009	added items 61813,68109 & 68110	

ITEM NUMBER	ITEM DESCRIPTION	UNITS	Number WPU used in $ adjust.
00519	SHEET PILE, STEEL	SF	avg. 1017 & 101
00540	REINF. STEEL	LB	101704
00542	EPOXY COATED REINF. STEEL	LB	101704
00560	STRUCTURAL STEEL JB-1	LB	avg. 1017 & 101
11030	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
11181	PATCH.HYDR.CEM.CONC. PAVE.	SY	101704
13290	GUARDRAIL GR-8 (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13292	GUARDRAIL GR-8A (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13294	GUARDRAIL GR-8B (NCHRP 350 TL-3)	LF	avg. 1017 & 101
13310	GUARDRAIL TERMINAL GR-6 (NCHRP 350)	LF	avg. 1017 & 101
13320	GUARDRAIL GR-2	LF	avg. 1017 & 101
13323	GUARDRAIL GR-2A	LF	avg. 1017 & 101
13331	RAD. GUARDRAIL GR-2	LF	avg. 1017 & 101
13333	RAD. GUARDRAIL GR-2A	LF	avg. 1017 & 101
13335	GUARDRAIL GR-3	LF	avg. 1017 & 101
13341	GUARDRAIL TER. GR-6(WEATHERING STEEL	LF	avg. 1017 & 101
13351	GUARDRAIL GR-8	LF	avg. 1017 & 101
13352	GUARDRAIL GR-8A	LF	avg. 1017 & 101
13353	GUARDRAIL GR-8B	LF	avg. 1017 & 101
13355	GUARDRAIL GR-10	LF	avg. 1017 & 101
13421	MEDIAN BARRIER MB-3	LF	avg. 1017 & 101
13450	MEDIAN BARRIER MB-5	LF	avg. 1017 & 101
13451	MEDIAN BARRIER MB-5A	LF	avg. 1017 & 101
13452	MEDIAN BARRIER MB-5B	LF	avg. 1017 & 101
13545	REINF. STEEL	LB	101704
14502	REINFORCING STEEL	LB	101704
15290	PATCH.CEM.CONC.PAVE.TY.CRCP-A	SY	101704
15302	PATCH.CEM.CONC.PAVE. TY. II	SY	101704
15305	PATCH.CEM.CONC.PAVE.TY. IV-A	SY	101704
17323	GUARDRAIL BEAM *	LF	avg. 1017 & 101
17325	RADIAL GUARDRAIL BEAM *	LF	avg. 1017 & 101
17327	RUB RAIL	LF	avg. 1017 & 101
17353	CABLE GR-3	LF	avg. 1017 & 101
17521	GUARDRAIL BEAM (WEATHERING STEEL)	LF	avg. 1017 & 101
17523	RADIAL GUARDRAIL BEAM (WEATHERING STEEL)	LF	avg. 1017 & 101
17525	RUB RAIL (WEATHERING STEEL)	LF	avg. 1017 & 101
22501	FENCE FE-W1	LF	avg. 1017 & 101
22643	FENCE FE-CL	LF	avg. 1017 & 101
22645	FENCE FE-CL VINYL COATED	LF	avg. 1017 & 101
23043	WATER GATE FE-4 TY.III	LF	avg. 1017 & 101
23501	FENCE FE-W1 (FABRIC ONLY)	LF	avg. 1017 & 101
45522	4" STEEL ENCASE. PIPE	LF	101706
45532	6" STEEL ENCASE. PIPE	LF	101706
45562	16" STEEL ENCASE. PIPE	LF	101706
45572	18" STEEL ENCASE. PIPE	LF	101706

45582	24" STEEL ENCASE. PIPE	LF	101706
45584	24" JACKED STEEL ENCASEMENT PIPE	LF	101706
45592	30" STEEL ENCASE. PIPE	LF	101706
50402	SIGN POST STEEL 3"	LF	101706
50404	SIGN POST STEEL 4"	LF	101706
50406	SIGN POST STEEL 6"	LF	101706
50410	SIGN POST STEEL 10"	LF	101706
50412	SIGN POST STEEL 12"	LF	101706
50414	SIGN POST STEEL 14"	LF	101706
50416	SIGN POST STEEL 16"	LF	101706
50418	SIGN POST STEEL 18"	LF	101706
51317	SIG. POLE MP-1 20' ONE ARM 30'	EA	101706
51319	SIG. POLE MP-1 20' ONE ARM 32'	EA	101706
51325	SIG. POLE MP-1 20' ONE ARM 38'	EA	101706
51327	SIG. POLE MP-1 20' ONE ARM 40'	EA	101706
51329	SIG. POLE MP-1 20' ONE ARM 42'	EA	101706
51331	SIG. POLE MP-1 20' ONE ARM 44'	EA	101706
51337	SIG. POLE MP-1 20' ONE ARM 50'	EA	101706
51339	SIG. POLE MP-1 20' ONE ARM 52'	EA	101706
51341	SIG. POLE MP-1 20' ONE ARM 54'	EA	101706
51344	SIG. POLE MP-1 20' ONE ARM 56'	EA	101706
51346	SIG. POLE MP-1 20' ONE ARM 58'	EA	101706
51347	SIG. POLE MP-1 20' ONE ARM 60'	EA	101706
51348	SIG. POLE MP-1 20' ONE ARM 62'	EA	101706
51368	SIG.POLE MP-1 20'TWO ARMS 36'& 42'	EA	101706
51400	SIG.POLE MP-1 CO.LU.ONE ARM 38	EA	101706
51402	SIG.POLE MP-1 CO.LU.ONE ARM 40	EA	101706
51408	SIG.POLE MP-1 CO.LU.ONE ARM 46	EA	101706
51412	SIG.POLE MP-1 CO.LU.ONE ARM 50	EA	101706
51414	SIG.POLE MP-1 CO.LU.ONE ARM 52	EA	101706
51416	SIG.POLE MP-1 CO.LU.ONE ARM 54	EA	101706
51418	SIG.POLE MP-1 CO.LU.ONE ARM 56	EA	101706
51420	SIG.POLE MP-1 CO.LU.ONE ARM 58	EA	101706
51422	SIG.POLE MP-1 CO.LU.ONE ARM 60	EA	101706
55162	LIGHTING POLE LP-1 30'-4'	EA	101706
55163	LIGHTING POLE LP-1 30'-6'	EA	101706
55166	LIGHTING POLE LP-1 30'-12'	EA	101706
55169	LIGHTING POLE LP-1 35'-6'	EA	101706
55171	LIGHTING POLE LP-1 35'-10'	EA	101706
55176	LIGHTING POLE LP-1 40'-8'	EA	101706
55185	LIGHTING POLE LP-2 TYPE A	EA	101706
55186	LIGHTING POLE LP-2 TYPE B	EA	101706
55187	LIGHTING POLE LP-2 TYPE C	EA	101706
55188	LIGHTING POLE LP-2 TYPE D	EA	101706
55189	LIGHTING POLE LP-2 TYPE E	EA	101706
55190	LIGHTING POLE LP-2 TYPE F	EA	101706
55192	LIGHTING POLE LP-2 TYPE H	EA	101706
60452	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
61700	REINF. STEEL	LB	101704
61704	CORROSION RESISTANT REINF. STEEL	LB	101704
61705	EPOXY COATED REINF. STEEL	LB	101704
61750	STRUCT.STEEL HIGH STRG.PLT.GIRDERS	LB	avg. 1017 & 101
61811	STR.STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
61812	STR.STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
61813	STR.STEEL PLATE GIRDER ASTM A709 GRADEHPS50W	LB	avg. 1017 & 101
61814	STR.STEEL PLATE GIRDER ASTM A709 GRADEHPS70W	LB	avg. 1017 & 101
61820	STR.STEEL ROLLED BEAM ASTM A709 GRADE 36	LB	avg. 1017 & 101

61821	STR.STEEL ROLLED BEAM ASTM A709 GRADE50	LB	avg. 1017 & 101
61822	STR.STEEL ROLLED BEAM ASTM A709 GRADE50W	LB	avg. 1017 & 101
61990	STEEL GRID FLOOR	SF	avg. 1017 & 101
64110	STEEL PILES 10"	LF	avg. 1017 & 101
64112	STEEL PILES 12"	LF	avg. 1017 & 101
64114	STEEL PILES 14"	LF	avg. 1017 & 101
64768	DRIVING TEST FOR 12" STEEL PILE	LF	avg. 1017 & 101
64778	DRIVING TEST FOR 14" STEEL PILE	LF	avg. 1017 & 101
65200	REINF. STEEL	LB	101704
65204	CORROSION RESISTANT REINF. STEEL	LB	101704
65205	EPOXY COATED REINF. STEEL	LB	101704
67086	PED. FENCE 6'	LF	avg. 1017 & 101
67088	PED. FENCE 8'	LF	avg. 1017 & 101
67089	PED. FENCE 10'	LF	avg. 1017 & 101
68100	REINF. STEEL	LB	101704
68104	CORROSION RESISTANT REINF. STEEL	LB	101704
68105	EPOXY COATED REINF. STEEL	LB	101704
68107	STR.STEEL PLATE GIRDER ASTM A709 GRADE50	LB	avg. 1017 & 101
68108	STR. STEEL PLATE GIRDER ASTM A709 GR50W	LB	avg. 1017 & 101
68109	STR. STEEL PLATE GIRDER ASTM A709 GR.HPS50W	LB	avg. 1017 & 101
68110	STR. STEEL PLATE GIRDER ASTM A709 GR.HPS70W	LB	avg. 1017 & 101
68112	STR.STEEL ROLLED BEAM ASTM A709 GR.36	LB	avg. 1017 & 101
68113	STR.STEEL ROLLED BEAM ASTM A709 GR.50	LB	avg. 1017 & 101
68114	STR.STEEL ROLLED BEAM ASTM A709 GR. 50W	LB	avg. 1017 & 101
68115	STRUCT. STEEL	LB	avg. 1017 & 101
68270	REINF. STEEL BRIDGE APPR. SLAB	LB	101704
69060	SHEET PILES, STEEL	SF	avg. 1017 & 101
69100	REINF. STEEL	LB	101704
69104	CORROSION RESISTANT REINF. STEEL	LB	101704
69105	EPOXY COATED REINF. STEEL	LB	101704
69110	STEEL PILES 10"	LF	avg. 1017 & 101
69112	STEEL PILE 12"	LF	avg. 1017 & 101
69113	DRIVING TEST FOR 12" STEEL PILE	LF	avg. 1017 & 101

SFV03AF-0609 October 22, 2008c

PREDETERMINED MINIMUM WAGE RATES LETTER (VOLUME 2)

The predetermined minimum wage rates, required for this contract in the following letter, are contained in the Special Provision for **PREDETERMINED MINIMUM WAGE RATES (VOLUME 1)**. That special provision is contained in the contract document assembly titled "Bid Proposal and Contract" which this contract document assembly accompanies.

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U.S. DEPARTMENT OF LABOR
OFFICE OF THE SECRETARY
WASHINGTON
DECISION OF THE SECRETARY

This case is before the Department of Labor pursuant to a request for a wage predetermination as required by law applicable to the work described.

A study has been made of wage conditions in the locality and based on information available to the Department of Labor the wage rates and fringe payments listed are hereby determined by the Secretary of Labor as prevailing for the described classes for labor in accordance with applicable law.

This wage determination decision and any modifications thereof during the period prior to the stated expiration date shall be made a part of every contract for performance of the described work as provided by applicable law and regulations of the Secretary of Labor, and the wage rates and fringe payments contained in this decision, including modifications, shall be the minimums to be paid under any such contract and subcontractors on the work.

The contracting officer shall require that any class of laborers and mechanics which is not listed in the wage determination and which is to be employed under the contract, shall be classified or reclassified conformably to the wage determination, and a report of the action taken shall be sent by the Federal agency to the Secretary of Labor. In the event the interested parties cannot agree on the proper classification or reclassification of a particular class of laborers and mechanics to be used, the question accompanied by the recommendation of the contracting officer shall be referred to the Secretary for determination.

Before using apprentices on the job the contractor shall present to the contracting officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U.S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U.S. Bureau of Apprenticeship and Training.

The contractor shall submit to the contracting officer written evidence of the established apprentice-journeyman ratios and wage in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

Fringe payments include medical and hospital care, compensation for injuries or illness resulting from occupational activity, unemployment benefits, life insurance, disability and sickness insurance, accident insurance (all designated as health and welfare), pensions, vacation and holiday pay, apprenticeship or other similar programs and other bona fide fringe benefits.

By direction of the Secretary of Labor

E. Irving Manger, Associate Administrator
Division of Wage Determinations
Wage and Labor Standards Administration

SF010DF-0712

May 1, 2012
FHWA-1273 (Electronic Version)

The following Form **FHWA-1273** titled **REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS** shall apply to this contract:

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FHWA-1273 – Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

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

ATTACHMENTS

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

I. GENERAL

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

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

   Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The

design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

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

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

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

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

II. NONDISCRIMINATION

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

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

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

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

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

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth

under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

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

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

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

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

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

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

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

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

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

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

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

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

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

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

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

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

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

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

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

6. Training and Promotion:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

III. NONSEGREGATED FACILITIES

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

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

IV. Davis-Bacon and Related Act Provisions

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

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

1. Minimum wages

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

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are

deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

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

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

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

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

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

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

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

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

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

2. Withholding

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

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship

programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

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

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

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

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

(III) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

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

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

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

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

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

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

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

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

b. Trainees (programs of the USDOL).

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

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

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

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

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

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

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

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

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

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

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

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

10. **Certification of eligibility.**

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

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

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

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

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

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

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

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

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

VI. SUBLETTING OR ASSIGNING THE CONTRACT

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

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

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

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

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

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

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

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

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

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

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

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

VII. SAFETY: ACCIDENT PREVENTION

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

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

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards

(29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

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

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

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

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

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

> "Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or
>
> Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or
>
> Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;
>
> Shall be fined under this title or imprisoned not more than 5 years or both."

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

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

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

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

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

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

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

1. Instructions for Certification – First Tier Participants:

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

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

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

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

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

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

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

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

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

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

* * * * *

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

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

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

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local)

transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

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

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

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

2. Instructions for Certification - Lower Tier Participants:

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

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

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

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

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

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred,

suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

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

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

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

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

* * * * *

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

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

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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

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

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

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

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

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

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

2. The goals for female and minority participation, expressed in percentage terms of the Contractor's aggregate work force in each trade on all construction works in the covered area, are as follows:

   Females- 6.9%
   Minorities - See Attachment "A"

   The goals are applicable to all the Contractor's construction work performed in the covered area, whether or not it is Federal or federally assisted. 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 non-federally 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 established herein. The hours of minority and female employment and training must be substantially uniform throughout the length of the 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 Executives Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs <u>within 10 workings days</u> the award of any construction subcontract in excess of $10,000 at any tier for construction works under this contract. The notification shall list the name, address and telephone number of the subcontractor, employer identification number, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the contract is to be performed.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As, used in this provision:

   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 peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

(iv) American Indian 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.

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 and 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 p of these specifications. The goals set forth m 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 coverer area. Covered construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals 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.

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, shall assign two or more women to each construction project. The Contractor shall specifically ensure that all foreman, 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 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 the 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 which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or women 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 complied under 7b 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 or annual report; by specific review of the 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 onsite supervisory personnel such as Superintendents and General Foremen 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 in any news media advertisement that the Contractor is "An Equal Opportunity Employer" for minority and

female, 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. Directs its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and 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 recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used m 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 Contractor's workforce.

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 of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for such opportunities through appropriate training or other means.

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 ensure 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.

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 (7a through 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 of its obligations under 7a through 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 workforce 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 noncompliance.

9. Goals for women have been established. However, the Contractor 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, that is even

thought the Contractor has achieved its goals for women, 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 nation 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 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 will proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate and make known to the Department a responsible official as the EEO Officer 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 least include for each employee the name, address, telephone numbers, construction trade, union 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 retrievable form; however, to the degree that existing records satisfy this requirement, Contractors will 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 (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

ATTACHMENT A

Economic Area	Goal (Percent)
Virginia:	
021 Roanoke-Lynchburg, VA	
SMSA Counties:	
4640 Lynchburg, VA	19.3
VA Amherst; VA Appomattox; VA Campbell; VA Lynchburg	
6800 Roanoke, VA	10.2
VA Botetourt; VA Craig; VA Roanoke; VA Roanoke City; VA Salem	
Non-SMSA Counties	12.0
VA Alleghany; VA Augusta; VA Bath; VA Bedford; VA Bland; VA Carroll; VA Floyd; VA Franklin; VA Giles; VA Grayson; VA Henry; VA Highland; VA Montgomery; VA Nelson; VA Patrick; VA Pittsylvania; VA Pulaski;	

VA Rockbridge; VA Rockingham; VA Wythe; VA Bedford City; VA Buena Vista:
VA Clifton Forge; VA Covington; VA Danville; VA Galax; VA Harrisonburg; VA Lexington; VA Martinsville; VA Radford; VA Staunton; VA Waynesboro; WV Pendleton.

022 Richmond, VA

SMSA Counties:

6140 Petersburg - Colonial Heights - Hopewell, VA 30.6
VA Dinwiddie; VA Prince George; VA Colonial Heights; VA Hopewell; VA Petersburg.

6760 Richmond, VA 24.9
VA Charles City; VA Chesterfield; VA Goochland, VA Hanover; VA Henrico; VA New Kent; VA Powhatan; VA Richmond.

Non-SMSA Counties 27.9
VA Albemarle; VA Amelia; VA Brunswick; VA Buckingham, VA Caroline; VA Charlotte; VA Cumberland; VA Essex; VA Fluvanna; VA Greene; VA Greensville; VA Halifax; VA King and Queen; VA King William; VA Lancaster; VA Louisa; VA Lunenburg; VA Madison; VA Mecklenburg; VA Northumberland; VA Nottoway; VA Orange; VA Prince Edward; VA Richmond VA Sussex; VA Charlottesville; VA Emporia; VA South Boston

023 Norfolk - Virginia Beach - Newport News VA:

SMSA Counties:

5680 Newport News- Hampton, VA 27.1
VA Gloucester; VA James City; VA York; VA Hampton; VA Newport News; VA Williamsburg.

5720 Norfolk - Virginia Beach - Portsmouth, VA - NC 26.6
NC Currituck; VA Chesapeake; VA Norfolk; VA Portsmouth; VA Suffolk; VA Virginia Beach.

Non-SMSA Counties 29.7
NC Bertie; NC Camden; NC Chowan; NC Gates; NC Hertford; NC Pasquotank; NC Perquimans; VA Isle of Wight; VA Matthews; VA Middlesex; VA Southampton; VA Surry; VA Franklin.

Washington, DC:

020 Washington, DC.

SMSA Counties:

8840 Washington, DC - MD - VA 28.0
DC District of Columbia; MD Charles; MD Montgomery MD Prince Georges; VA Arlington; VA Fairfax; VA Loudoun; VA Prince William VA Alexandria; VA Fairfax City; VA Falls Church.

Non- SMSA Counties 25.2
MD Calvert; MD Frederick; MD St. Marys: MD Washington; VA Clarke; VA Culpeper; VA Fauquier; VA Frederick; VA King George; VA Page; VA Rappahannock; VA Shenandoah; VA Spotsylvania; VA Stafford; VA Warren: VA Westmoreland; VA Fredericksburg; VA Winchester WV Berkeley; WV Grant; WV Hampshire; WV Hardy; WV Jefferson; WV Morgan.

Tennessee:

052 Johnson City - Kingsport - Bristol, TN - VA

SMSA Counties:

3630 Johnson City - Kingsport -Bristol, TN-VA 2.6
TN Carter; TN Hawkins; TN Sullivan; TN Washington; VA Scott: VA Washington; VA Bristol.

Non-SMSA Counties 3.2
TN Greene; TN Johnson; VA Buchanan; VA Dickenson; VA Lee; VA Russell; VA Smyth; VA Tazewell; VA Wise; VA Norton; WV McDowell; WV Mercer.

Maryland:

019 Baltimore MD

Non-SMSA Counties 23.6

MD Caroline; MD Dorchester; MD Kent; MD Queen Annes; MD Somerset; MD Talbot; MD Wicomico; MD Worchester; VA Accomack; VA Northampton.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
DIVISION I—GENERAL PROVISIONS
(2013 PLANT MIX SCHEDULES)

September 7, 2012

SECTION 101—DEFINITIONS OF ABBREVIATIONS, ACRONYMS, AND TERMS

Section 101.02—Terms of the Specifications is amended to replace the definition for **Notice to Proceed** with the following:

> **Notice to Proceed.** A date selected by the Contractor that is no earlier than 15 nor later than 30 calendar days after the date of contract execution on which the Contractor intends to begin the work, or a contract specific date on which the Contractor may begin the work identified as the Notice to Proceed date in the Contract Documents.

And to add the definition for **"Storm Sewer System"** as follows:

> **Storm Sewer System -** A drainage system consisting of a series of at least two interconnecting pipes and structures (minimum of two drop inlets, manholes, junction boxes, etc.) designed to intercept and convey stormwater runoff from a specific storm event without surcharge.

SECTION 102—BIDDING REQUIREMENTS AND CONDITIONS

Section 102.01—PREQUALIFICATION OF BIDDERS of the Specifications is amended to replace the first paragraph of (a) with the following:

> All prospective Bidders, including all members of a joint venture, must prequalify with the Department and shall have received a certification of qualification in accordance with the Rules Governing Prequalification Privileges prior to bidding. These rules and regulations can be found within the Department's Rules Governing Prequalification Privileges via the Prequalification Application. This requirement may be waived by a project-specific provision in the bid proposal.
>
> All subcontractors must be prequalified prior to performing any work on the contract, except that prequalification will not be required for subcontractors only performing a service as defined by the Code of Virginia, or only performing work items noted in the proposal as "Specialty Items".
>
> In order to be eligible for DBE credit under Special Provision for Section 107.15, DBE federal-aid contract subcontractors must be VDOT prequalified and DMBE certified at the time of bid submission. The prequalification and certification status of a DBE may affect the award of the contract to the prime contractor and the award of the subcontract to the DBE at any point during the contract.

Section 102.04(c) **Notice of Alleged Ambiguities** of the Specifications is amended to replace the first paragraph with the following:

> If a word, phrase, clause, or any other portion of the proposal is alleged to be ambiguous, the Bidder shall submit to the State Contract Engineer a written notice of the alleged ambiguity not later than 10 days prior to the date of receipt of bids and request an interpretation thereof. This written notice shall be submitted via the CABB (Contractor Advertisement Bulletin Board) system located on the Construction website at www.VDOT.Virginia.gov. Authorized interpretations will be issued by the State Contract Engineer to each person who received a proposal and will be posted on the CABB system.

Section 102.05—Preparation Of Bid of the Specifications is amended to include the following:

The Bidder may bid on one or more individual contract schedule. The Bidder shall submit average unit prices in a contract schedule. Each contract schedule will be awarded and administered as a separate contract.

Section 102.11— eVA Business-To-Government Vendor Registration of the Specifications is replaced with the following:

Bidders are not required to be registered with "eVA Internet e-procurement solution" at the time bids are submitted, however, prior to award, the lowest responsive and responsible bidder must be registered with “eVA Internet e-procurement solution” or the bid will be rejected. Registration shall be performed by accessing the eVA website portal www.eva.state.va.us, following the instructions and complying with the requirements therein.

When registering with eVa it is the bidder’s responsibility to enter or have entered their correct PA type address or addresses in eVa in order to receive payments on any contracts that the Department (VDOT) may award to them as the lowest responsive and responsible bidder. The Bidder shall also ensure their prequalification address(es) match those registered with eVa. Failure on the part of the bidder or Contractor to meet either of these requirements may result in late payment of monthly estimates.

SECTION 104—SCOPE OF WORK

Section 104.01—Intent of Contract of the Specifications is replaced by the following:

The intent of the Contract is to provide for the completion of all work specified therein.

The Contractor shall base his bid on the cost of completing all work specified in the Contract.

Budgetary constraints as deemed necessary by the Department may be imposed at any time during the life of the Contract. This may affect the number of routes paved and thus the final quantity of work to be performed.

If prior to initiating or during the performance of the work, the Engineer determines that the cost of completion of all work specified in the Contract will exceed the limits of the budgeted funds, the Contractor will be notified immediately. With such notice the Engineer will specify which routes will be deleted according to the Department’s predetermined listing of priorities.

If after routes are deleted and work proceeds, budgets revisions indicate that the cost of work to be completed by the Contractor will fall below the limits of the budgeted funds, the Department will determine which of the previously deleted routes will be returned to the Schedule to be completed at the contract unit price.

SECTION 105—CONTROL OF WORK

Section 105.01—Notice to Proceed of the Specifications is replaced with the following:

Unless otherwise indicated in the Contract, the Notice to Proceed date will be the date selected by the Contractor on which the Contractor intends to begin the work. That date shall be no earlier than 15 nor later than 30 calendar days after the date of contract execution. The State Contract Engineer will contact the Contractor on the date of contract execution to inform him that the contract has been executed. The State Contract Engineer will also confirm this date in the Letter of Contract Execution.

Copies of the Letter of Contract Execution will be distributed to Department personnel involved in the administration of the Contract and to the Contractor. Within 10 calendar days after the date of contract execution the Contractor shall submit to the Engineer written notice of the date he has selected as his Notice to Proceed date. If the Contractor fails to provide written notice of his selected Notice to Proceed Date within 10 calendar days of contract execution, the selected Notice to Proceed Date will become the date 15 calendar days after the date of contract execution. The Contractor shall begin work no later than 10 calendar days after the date he has selected as his Notice to Proceed date, unless the Notice to Proceed date is otherwise indicated in the Contract, in which case the Contractor shall begin work within 10 calendar days after the specific Notice to Proceed date indicated in the Contract.

Contract Time will commence on the date of the Notice to Proceed. The Letter of Contract Execution will identify the Chief Engineer's authorized representative, hereafter referred to as the Engineer, who is responsible for written directives and changes to the Contract. The Engineer will contact the Contractor after notice of award to arrange a pre-construction conference.

In the event the Contractor, for matters of his convenience, wishes to begin work earlier than 15 calendar days or later than 30 calendar days after the date of contract execution, he shall make such a request in writing to the Engineer within 10 calendar days of the date of contract execution or once a Notice to Proceed Date has been established, if he wishes to begin work more than 10 calendar days after his selected Notice to Proceed date or the Notice to Proceed Date indicated in the Contract, he shall make such a request to the Engineer in writing no later than 5 calendar days after the Notice to Proceed date. If this requested start date is acceptable to the Department, the Contractor will be notified in writing; however, the Contract fixed completion date will not be adjusted but will remain binding. The Contractor's request to adjust the start date for the work on the Contract will not be considered as a basis for claim that the time resulting from the Contractor's adjusted start date, if accepted by the Engineer, is insufficient to accomplish the work nor shall it relieve the Contractor of his responsibility to perform the work in accordance with the scope of work and requirements of the Contract. In no case shall work begin before the Department executes the Contract or prior to the Notice to Proceed date unless otherwise permitted by the Contract or authorized by the Engineer. The Contractor shall notify the Engineer at least 24 hours prior to the date on which he will begin the work.

Section 105.02—Pre-Construction Conference of the Specifications is amended to replace the first paragraph with the following:

After notification of award and prior to the Notice to Proceed date the Contractor shall attend a pre-construction conference scheduled by the Engineer to discuss the Contractor's planned operations for prosecuting and completing the work within the time limit of the Contract. At the pre-construction conference the Engineer and the Contractor will identify in writing the authorities and responsibilities of project personnel for each party. The pre-construction conference may be held simultaneously with the scheduling conference when the Engineer so indicates this in advance to the Contractor. When these are simultaneously held, the Contractor shall come prepared to discuss preparation and submittal details of the progress schedule in accordance with the requirements of the Contract.

Section 105.06—Subcontracting of the Specifications is amended to include the following:

Any distribution of work shall be evidenced by a written binding agreement on file at the project site. Where no field office exists, such agreement shall be readily available upon request to Department inspector(s) assigned to the project.

The provisions contained in Form FHWA-1273 specifically, and other federal provisions included with the prime Contract are generally applicable to all Federal-aid construction projects and must be made a part of, and physically incorporated into all contracts, as well as, appropriate subcontracts for work so as to be binding in those agreements.

Section 105.10(c)(1)**—Steel Structures** of the Specifications is replaced with the following:

Working drawings for steel structures, including metal handrails, shall consist of shop detail, erection, and other working drawings showing details, dimensions, sizes of units, and other information necessary for the fabrication and erection of metal work.

Section 105.14—Maintenance During Construction of the Specifications is amended to add the following:

The Contractor shall provide at least one person on the project site during all work operations who is currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS). This person must have the verification card with them while on the project site. This person shall be responsible for the oversight of work zone traffic control within the project limits in compliance with the contract requirements involving the plans, specifications, the VWAPM, and the MUTCD. This person's duties shall include the supervision of the installation, adjustment (if necessary), inspection, maintenance and removal when no longer required of all traffic control devices on the project.

If none of the Contractor's on-site personnel responsible for the supervision of such work has the required verification with them or if they have an outdated verification card showing they are not currently verified either by the Department in Intermediate Work Zone Traffic Control, or by the American Traffic Safety Services Association (ATSSA) as a Traffic Control Supervisor (TCS) all work on the project will be suspended by the Engineer.

The Contractor shall provide at least one person on site who is, at a minimum, verified by the Department in Basic Work Zone Traffic Control for each construction and\or maintenance operation that involves installing, maintaining, or removing work zone traffic control devices. This person shall be responsible for the placement, maintenance and removal of work zone traffic control devices.

In the event none of the Contractor's on-site personnel of any construction/maintenance operation has, at a minimum, the required verification by the Department in Basic Work Zone Traffic Control, that construction/maintenance operation will be suspended by the Engineer until that operation is appropriately staffed in accordance with the requirements herein.

Section 105.15(b) **Mailboxes and Newspaper Boxes** of the Specifications is replaced with the following:

(b) **Mailboxes and Newspaper Boxes:** When removal of existing mailboxes and newspaper boxes is made necessary by construction operations, the Contractor shall place them in temporary locations so that access to them will not be impaired. Prior to final acceptance, boxes shall be placed in their permanent locations as designated by the Engineer and left in as good condition as when found. Boxes or their supports that are damaged through negligence on the part of the Contractor shall be replaced at his expense. The cost of removing and resetting existing boxes shall be included in other pay items of the Contract. New mailboxes designated in the plans shall be paid for in accordance with the provisions of Section 521 of the Specifications.

SECTION 107—LEGAL RESPONSIBILITIES

Section 107.13—Labor and Wages of the Specifications is amended to add the following:

(c) **Job Service Offices:** In advance of the Contract starting date, the Contactor may contact the Job Service Office of the Virginia Employment Commission at the nearest location to secure referral of available qualified workers in all occupational categories. The closest office may be obtained by accessing the VEC website at http://www.vec.virginia.gov/vec-local-offices.

Section 107.14(f) **Training** of the Specifications is amended to replace 5 and 6 with the following:

5. If the Contract provides a pay item for trainees, training shall be in accordance with the requirements of Section 518 of the Specifications.

Section 107.15 of the Specifications is replaced by the following:

Section 107.15—Use of Disadvantaged Business Enterprises (DBEs)

A. Disadvantaged Business Enterprise (DBE) Program Requirements

Any Contractor, subcontractor, supplier, DBE firm, and contract surety involved in the performance of work on a federal-aid contract shall comply with the terms and conditions of the United States Department of Transportation (USDOT) DBE Program as the terms appear in Part 26 of the Code of Federal Regulations (49 CFR as amended), the USDOT DBE Program regulations; and the Virginia Department of Transportation's (VDOT or the Department) Road and Bridge Specifications and DBE Program rules and regulations.

For the purposes of this provision, Contractor is defined as the Prime Contractor of the contract; and sub-contractor is defined as any DBE supplier, manufacturer, or subcontractor performing work or furnishing material, supplies or services to the contract. The Contractor shall physically include this same contract provision in every supply or work/service subcontract that it makes or executes with a subcontractor having work for which it intends to claim credit.

In accordance with 49 CFR Part 26 and VDOT's DBE Program requirements, the Contractor, for itself and for its subcontractors and suppliers, whether certified DBE firms or not, shall commit to complying fully with the auditing, record keeping, confidentiality, cooperation, and anti-intimidation or retaliation provisions contained in those federal and state DBE Program regulations. By bidding on this contract, and by accepting and executing this contract, the Contractor agrees to assume these contractual obligations and to bind the Contractor's subcontractors contractually to the same at the Contractor's expense.

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

All administrative remedies noted in this provision are automatic unless the Contractor exercises the right of appeal within the required timeframe(s) specified herein. Appeal requirements, processes, and procedures shall be in accordance with guidelines stated herein and current at the time of the proceedings. Where applicable, the Department will notify the Contractor of any changes to the appeal requirements, processes, and procedures after receiving notification of the Contractor's desire to appeal.

All time frames referenced in this provision are expressed in business days unless otherwise indicated. Should the expiration of any deadline fall on a weekend or holiday, such deadline will automatically be extended to the next normal business day.

B. DBE Certification

The only DBE firms eligible to perform work on a federal-aid contract for DBE contract goal credit are firms certified as Disadvantaged Business Enterprises by the Virginia Department of Minority Business Enterprise (DMBE) or the Metropolitan Washington Airports Authority (MWAA) in accordance with federal and VDOT guidelines. DBE firms must be certified in the

specific work listed for DBE contract goal credit. A directory listing of certified DBE firms can be obtained from the Virginia Department of Minority Business Enterprise and the Metropolitan Washington Airports Authority Internet websites: *http://www.dmbe.virginia.gov/* ; *http://mwaa.com/362.htm*

C. Bank Services

The Contractor and each subcontractor are encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals. Such banking services and the fees charged for services typically will not be eligible for DBE Program contract goal credit. Such information is available from the VDOT's Internet Civil Rights Division website:
http://insidevdot/C7/Civil%20Rights/default.aspx

D. DBE Program-Related Certifications Made by Bidders\Contractors

By submitting a bid and by entering into any contract on the basis of that bid, the bidder/Contractor certifies to each of the following DBE Program-related conditions and assurances:

1. That the management and bidding officers of its firm agree to comply with the bidding and project construction and administration obligations of the USDOT DBE Program requirements and regulations of 49 CFR Part 26 as amended, and VDOT's Road and Bridge Specifications and DBE Program requirements and regulations.

2. Under penalty of perjury and other applicable penal law that it has complied with the DBE Program requirements in submitting the bid, and shall comply fully with these requirements in the bidding, award, and execution of the contract.

3. To ensure that DBE firms have been given full and fair opportunity to participate in the performance of the contract. The bidder certifies that all reasonable steps were, and will be, taken to ensure that DBE firms had, and will have, an opportunity to compete for and perform work on the contract. The bidder further certifies that the bidder shall not discriminate on the basis of race, color, age, national origin, or sex in the performance of the contract or in the award of any subcontract. Any agreement between a bidder and a DBE whereby the DBE promises not to provide quotations for performance of work to other bidders is prohibited.

4. As a bidder, good faith efforts were made to obtain DBE participation in the proposed contract at or above the goal for DBE participation established by VDOT. It has submitted as a part of its bid true, accurate, complete, and detailed documentation of the good faith efforts it performed to meet the contract goal for DBE participation. The bidder, by signing and submitting its bid, certifies the DBE participation information submitted within the stated time thereafter is true, correct, and complete, and that the information provided includes the names of all DBE firms that will participate in the contract, the specific line item(s) that each listed DBE firm will perform, and the creditable dollar amounts of the participation of each listed DBE. The specific line item must reference the VDOT line number and item number contained in the proposal.

5. The bidder further certifies, by signing its bid, it has committed to use each DBE firm listed for the specific work item shown to meet the contract goal for DBE participation. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR Part 26.53 and the contract documents. By signing the bid, the bidder certifies on work that it proposes to sublet; it has made good faith efforts to seek out and consider DBEs as potential subcontractors. The bidder shall contact DBEs to solicit their interest, capability, and prices in sufficient time to allow them to respond

effectively, and shall retain on file proper documentation to substantiate its good faith efforts. Award of the contract will be conditioned upon meeting these and other listed requirements of 49 CFR Part 26.53 and the contract documents.

6. Once awarded the contract, the Contractor shall make good faith efforts to utilize DBE firms to perform work designated to be performed by DBEs at or above the amount or percentage of the dollar value specified in the bidding documents. Further, the Contractor understands it shall not unilaterally terminate, substitute for, or replace any DBE firm that was designated in the executed contract in whole or in part with another DBE, any non-DBE firm, or with the Contractor's own forces or those of an affiliate of the Contractor without the prior written consent of VDOT as set out within the requirements of this provision.

7. Once awarded the contract, the Contractor shall designate and make known to the Department a liaison officer who is assigned the responsibility of administering and promoting an active and inclusive DBE program as required by 49 CFR Part 26 for DBEs. The designation and identity of this officer need be submitted only once by the Contractor during any twelve (12) month period at the preconstruction conference for the first contract the Contractor has been awarded during that reporting period. The Department will post such information for informational and administrative purposes at VDOT's Internet Civil Rights Division website.

8. Once awarded the contract, the Contractor shall comply fully with all regulatory and contractual requirements of the USDOT DBE Program, and that each DBE firm participating in the contract shall fully perform the designated work items with the DBE's own forces and equipment under the DBE's direct supervision, control, and management. Where a contract exists and where the Contractor, DBE firm, or any other firm retained by the Contractor has failed to comply with federal or VDOT DBE Program regulations and/or their requirements on that contract, VDOT has the authority and discretion to determine the extent to which the DBE contract regulations and\or requirements have not been met, and will assess against the Contractor any remedies available at law or provided in the contract in the event of such a contract breach.

9. In the event a bond surety assumes the completion of work, if for any reason VDOT has terminated the prime Contractor, the surety shall be obligated to meet the same DBE contract terms and requirements as were required of the original prime Contractor in accordance with the requirements of this specification.

E. Disqualification of Bidder

Bidders may be disqualified from bidding for failure to comply with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge Specifications.

F. Bidding Procedures

The following bidding procedures shall apply to the contract for DBE Program compliance purposes:

1. **Contract Goal, Good Faith Efforts Specified:** All bidders evidencing the attainment of DBE goal commitment equal to or greater than the required DBE goal established for the project must submit completed Form C-111, Minimum DBE Requirements, and Form C-48, Subcontractor/Supplier Solicitation and Utilization, as a part of the bid documents.

   Form C-111 may be submitted electronically or may be faxed to the Department, but in no case shall the bidder's Form C-111 be received later than 10:00 a.m. the next

business day after the time stated in the bid proposal for the receipt of bids. Form C-48 must be received within ten (10) business days after the bid opening.

If, at the time of submitting its bid, the bidder knowingly cannot meet or exceed the required DBE contract goal, it shall submit Form C-111 exhibiting the DBE participation it commits to attain as a part of its bid documents. The bidder shall then submit Form C-49, DBE Good Faith Efforts Documentation, within two (2) business days after the bid opening.

The lowest responsive and responsible bidder must submit its properly executed Form C-112, Certification of Binding Agreement, within three (3) business days after the bids are received. DBEs bidding as prime contractors are not required to submit Form C-112 unless they are utilizing other DBEs as subcontractors.

If, after review of the apparent lowest bid, VDOT determines the DBE requirements have not been met, the apparent lowest successful bidder must submit Form C-49, DBE Good Faith Efforts Documentation, which must be received by the Contract Engineer within two (2) business days after official notification of such failure to meet the aforementioned DBE requirements.

Forms C-48, C-49, C-111, and C-112 can be obtained from the VDOT website at: *http://vdotforms.vdot.virginia.gov/*

Instructions for submitting Form C-111 can be obtained from the VDOT website at: *http://www.virginiadot.org/business/resources/const/Exp_DBE_Commitments.pdf*

2. **Bid Rejection:** The failure of a bidder to submit the required documentation within the timeframes specified in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision may be cause for rejection of that bidder's bid.

   If the lowest bidder is rejected for failure to submit the required documentation in the specified time frames, the Department may award the work to the next lowest bidder, or re-advertise the proposed work at a later date or proceed otherwise as determined by the Commonwealth.

3. **Good Faith Efforts Described:** In order to award a contract to a bidder that has failed to meet DBE contract goal requirements, VDOT will determine if the bidder's efforts were adequate good faith efforts, and if given all relevant circumstances, those efforts were made actively and aggressively to meet the DBE requirements. Efforts to obtain DBE participation are not good faith efforts if they could not reasonably be expected to produce a level of DBE participation sufficient to meet the DBE Program and contract goal requirements.

   Good faith efforts may be determined through use of the following list of the types of actions the bidder may make to obtain DBE participation. This is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts of similar intent may be relevant in appropriate cases:

   (a) Soliciting through reasonable and available means, such as but not limited to, attendance at pre-bid meetings, advertising, and written notices to DBEs who have the capability to perform the work of the contract. Examples include: advertising in at least one daily/weekly/monthly newspaper of general circulation, as applicable; phone contact with a completely documented telephone log, including the date and time called, contact person, or voice mail status; and internet contacts with supporting documentation, including dates advertised. The bidder shall solicit this interest no less than five (5) business days before the bids are due so that the

solicited DBEs have enough time to reasonably respond to the solicitation. The bidder shall determine with certainty if the DBEs are interested by taking reasonable steps to follow up initial solicitations as evidenced by documenting such efforts as requested on Form C-49, DBE Good Faith Efforts Documentation.

(b) 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 Contractor might otherwise prefer to completely perform all portions of this work in its entirety or use its own forces;

(c) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner, which will assist the DBEs in responding to a solicitation;

(d) Negotiating for participation in good faith with interested DBEs;

1. Evidence of such negotiation shall include the names, addresses, and telephone numbers of DBEs that were considered; dates DBEs were contacted; a description of the information provided regarding the plans, specifications, and requirements of the contract for the work selected for subcontracting; and, if insufficient DBE participation seems likely, evidence as to why additional agreements could not be reached for DBEs to perform the work;

2. A bidder using good business judgment should consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and should take a firm's price, qualifications, 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 sufficient reason for a bidder's failure to meet the contract goal for DBE participation, as long as such costs are reasonable and comparable to costs customarily appropriate to the type of work under consideration. Also, the ability or desire of a bidder to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make diligent good faith efforts. Bidders are not, however, required to accept higher quotes from DBEs if the price difference can be shown by the bidder to be excessive, unreasonable, or greater than would normally be expected by industry standards;

(e) A bidder cannot reject a DBE as being unqualified without sound reasons based on a thorough investigation of the DBE's capabilities. The DBE's standing within its industry, membership in specific groups, organizations, associations, and political or social affiliations, and union vs. non-union employee status are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal for DBE participation;

(f) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by VDOT or by the bidder/Contractor;

(g) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services subject to the restrictions contained in these provisions;

(h) Effectively using the services of appropriate personnel from VDOT and from DMBE; available minority/women community or minority organizations; 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 utilization of qualified DBEs.

G. Documentation and Administrative Reconsideration of Good Faith Efforts

During Bidding: As described in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision, the bidder must provide Form C-49, DBE Good Faith Efforts Documentation, of its efforts made to meet the DBE contract goal as proposed by VDOT within the time frame specified in this provision. The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the bidder. The bidder shall attach additional pages to the certification, if necessary, in order to fully detail specific good faith efforts made to obtain the DBE firms participation in the proposed contract work.

However, regardless of the DBE contract goal participation level proposed by the bidder or the extent of good faith efforts shown, all bidders shall timely and separately file their completed and executed forms C-111, C-112, C-48, and C-49, as aforementioned, or face potential bid rejection.

If a bidder does not submit its completed and executed forms C-111, or C-112, when required by this Special Provision, the bidder's bid will be considered non-responsive and may be rejected.

Where the Department upon initial review of the bid results determines the apparent low bidder has failed or appears to have failed to meet the requirements of the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision and has failed to adequately document that it made a good faith effort to achieve sufficient DBE participation as specified in the bid proposal, that firm upon notification of the Department's initial determination will be offered the opportunity for administrative reconsideration before VDOT rejects that bid as non-responsive. The bidder shall address such request for reconsideration in writing to the Contract Engineer within five (5) business days of receipt of notification by the Department and shall be given the opportunity to discuss the issue and present its evidence in person to the Administrative Reconsideration Panel. The Administrative Reconsideration Panel will be made up of VDOT Division Administrators or their designees, none of who took part in the initial determination that the bidder failed to make the goal or make adequate good faith efforts to do so. After reconsideration, VDOT shall notify the bidder in writing of its decision and explain the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so.

If, after reconsideration, the Department determines the bidder has failed to meet the requirements of the contract goal and has failed to make adequate good faith efforts to achieve the level of DBE participation as specified in the bid proposal, the bidder's bid will be rejected.

If sufficient documented evidence is presented to demonstrate that the apparent low bidder made reasonable good faith efforts, the Department will award the contract and reduce the DBE requirement to the actual commitment identified by the lowest successful bidder at the time of its bid. The Contractor is still encouraged to seek additional DBE participation during the life of the contract.

However, such action will not relieve the Contractor of its responsibility for complying with the reduced DBE requirement during the life of the contract or any administrative sanctions as may be appropriate.

During the Contract: If a DBE, through no fault of the Contractor, is unable or unwilling to fulfill his agreement with the Contractor, the Contractor shall immediately notify the Department and provide all relevant facts. If a Contractor relieves a DBE subcontractor of

the responsibility to perform work under their subcontract, the Contractor is encouraged to take the appropriate steps to obtain a DBE to perform an equal dollar value of the remaining subcontracted work. In such instances, the Contractor is expected to seek DBE participation towards meeting the goal during the performance of the contract.

If the Contractor fails to conform to the schedule of DBE participation as shown on the progress schedule, or at any point at which it is clearly evident that the remaining dollar value of allowable credit for performing work is insufficient to obtain the scheduled participation, and the Contractor has not taken the preceding actions, the Contractor and any aforementioned affiliates may be subject to disallowance of DBE credit until such time as conformance with the schedule of DBE participation is achieved.

Project Completion: If the Contractor fails upon completion of the project to meet the required participation, the Contractor and any prime contractual affiliates, as in the case of a joint venture, may be enjoined from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects for a period of 90 days.

Prior to enjoinment from bidding or denial to participate as a subcontractor for failure to comply with participation requirements, as provided hereinbefore, the Contractor may submit documentation to the State Construction Engineer to substantiate that failure was due solely to quantitative underrun(s), elimination of items subcontracted to DBEs, or to circumstances beyond their control, and that all feasible means have been used to obtain the required participation. The State Construction Engineer upon verification of such documentation shall make a determination whether or not the Contractor has met the requirements of the contract.

If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Contractor may request an appearance before the Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. The decision of the Administrative Reconsideration Panel shall be administratively final. If the decision is made to enjoin the Contractor from bidding on other VDOT work as described herein, the enjoinment period will begin upon the Contractor's failure to request a hearing within the designated time frame or upon the Administrative Reconsideration Panel's decision to enjoin, as applicable.

H. DBE Participation for Contract Goal Credit

DBE participation on the contract will count toward meeting the DBE contract goal in accordance with the following criteria:

1. Cost-plus subcontracts will not be considered to be in accordance with normal industry practice and will not normally be allowed for credit.

2. The applicable percentage of the total dollar value of the contract or subcontract awarded to the DBE will be counted toward meeting the contract goal for DBE participation in accordance with the **DBE Program-Related Certifications Made by Bidders\Contractors** section of this Special Provision for the value of the work, goods, or services that are actually performed or provided by the DBE firm itself or subcontracted by the DBE to other DBE firms.

3. When a DBE performs work as a participant in a joint venture with a non-DBE firm, the Contractor may count toward the DBE goal only that portion of the total dollar value of the contract equal to the distinctly defined portion of the contract work that the DBE has performed with the DBE's own forces or in accordance with the provisions of this Section. The Department shall be contacted in advance regarding any joint venture involving both a DBE firm and a non-DBE firm to coordinate Department review and approval of the joint

venture's organizational structure and proposed operation where the Contractor seeks to claim the DBE's credit toward the DBE contract goal.

4. When a DBE subcontracts part of the work of the contract to another firm, the value of that subcontracted work may be counted toward the DBE contract goal only if the DBE's subcontractor at a lower tier is a certified DBE. Work that a DBE subcontracts to either a non-DBE firm or to a non-certified DBE firm will not count toward the DBE contract goal. The cost of supplies and equipment a DBE subcontractor purchases or leases from the prime Contractor or the prime's affiliated firms will not count toward the contract goal for DBE participation.

5. The Contractor may count expenditures to a DBE subcontractor toward the DBE contract goal only if the DBE performs a Commercially Useful Function (CUF) on that contract.

6. A Contractor may not count the participation of a DBE subcontractor toward the Contractor's final compliance with the DBE contract goal obligations until the amount being counted has actually been paid to the DBE. A Contractor may count sixty (60) percent of its expenditures actually paid for materials and supplies obtained from a DBE certified as a regular dealer, and one hundred (100) percent of such expenditures actually paid for materials and supplies obtained from a certified DBE manufacturer.

   (a) For the purposes of this Special Provision, a regular dealer is defined as a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment required and used under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a regular dealer, the DBE firm shall be an established business that regularly engages, as its principal business and under its own name, in the purchase and sale or lease of the products or equipment in question. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions will not be considered regular dealers.

   (b) A DBE firm may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business where it keeps such items in stock if the DBE both owns and operates distribution equipment for the products it sells and provides for the contract work. Any supplementation of a regular dealer's own distribution equipment shall be by a long-term lease agreement and not on an *ad hoc* or contract-by-contract basis to be eligible for credit to meet the DBE contract goal.

   (c) If a DBE regular dealer is used for DBE contract goal credit, no additional credit will be given for hauling or delivery to the project site goods or materials sold by that DBE regular dealer. Those delivery costs shall be deemed included in the price charged for the goods or materials by the DBE regular dealer, who shall be responsible for their distribution.

   (d) For the purposes of this Special Provision, a manufacturer will be defined as a firm that operates or maintains a factory or establishment that produces on the premises the materials, supplies, articles, or equipment required under the contract and of the general character described by the project specifications. A manufacturer shall include firms that produce finished goods or products from raw or unfinished material, or purchase and substantially alter goods and materials to make them suitable for construction use before reselling them.

   (g) A Contractor may count toward the DBE contract goal the following expenditures to DBE firms that are not regular dealers or manufacturers for DBE program purposes:

1. The entire amount of fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant or managerial services, or for providing bonds or insurance specifically required for the performance of the federal-aid contract, if the fee is reasonable and not excessive or greater than would normally be expected by industry standards for the same or similar services.

2. The entire amount of that portion of the construction contract that is performed by the DBE's own forces and equipment under the DBE's supervision. This includes the cost of supplies and materials ordered and paid for by the DBE for contract work, including supplies purchased or equipment leased by the DBE, except supplies and equipment a DBE subcontractor purchases or leases from the prime Contractor or its affiliates.

(h) A Contractor may count toward the DBE contract goal one hundred (100) percent of the fees paid to a DBE trucker or hauler for the delivery of material and supplies required on the project job site, but not for the cost of those materials or supplies themselves, provided that the trucking or hauling fee is determined by VDOT to be reasonable, as compared with fees customarily charged by non-DBE firms for similar services. A Contractor shall not count costs for the removal or relocation of excess material from or on the job site when the DBE trucking company is not the manufacturer of or a regular dealer in those materials and supplies. The DBE trucking firm shall also perform a Commercially Useful Function (CUF) on the project and not operate merely as a pass through for the purposes of gaining credit toward the DBE contract goal. Prior to submitting a bid, the Contractor shall determine, or contact the VDOT Civil Rights Division or its district Offices for assistance in determining, whether a DBE trucking firm will meet the criteria for performing a CUF on the project. See section on **Miscellaneous DBE Program Requirements; Factors used to Determine if a DBE Trucking Firm is Performing a CUF**.

(i) The Contractor will receive DBE contract goal credit for the fees or commissions charged by and paid to a DBE broker who arranges or expedites sales, leases, or other project work or service arrangements provided that those fees are determined by VDOT to be reasonable and not excessive as compared with fees customarily charged by non-DBE firms for similar services. For the purposes of this Special Provision, a broker is defined as a person or firm that regularly engages in arranging for delivery of material, supplies, and equipment, or regularly arranges for the providing of project services as a course of routine business but does not own or operate the delivery equipment necessary to transport materials, supplies, or equipment to or from a job site.

I. Performing a Commercially Useful Function (CUF)

No credit toward the DBE contract goal will be allowed for contract payments or expenditures to a DBE firm if that DBE firm does not perform a CUF on that contract. A DBE performs a CUF when the DBE is solely responsible for execution of a distinct element of the contract work and the DBE actually performs, manages, and supervises the work involved with the firm's own forces or in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. To perform a CUF the DBE alone shall be responsible and bear the risk for the material and supplies used on the contract, selecting a supplier or dealer from those available, negotiating price, determining quality and quantity, ordering the material and supplies, installing those materials with the DBE's own forces and equipment, and paying for those materials and supplies. The amount the DBE firm is to be paid under the contract shall be commensurate with the work the DBE actually performs and the DBE credit claimed for the DBE's performance.

Monitoring CUF Performance: It shall be the Contractor's responsibility to ensure that all DBE firms selected for subcontract work on the contract, for which he seeks to claim credit toward the contract goal, perform a CUF. Further, the Contractor is responsible for and shall ensure that each DBE firm fully performs the DBE's designated tasks with the DBE's own forces and equipment under the DBE's own direct supervision and management or in accordance with the provisions of the **DBE Participation for Contract Goal Credit** section of this Special Provision. For the purposes of this provision the DBE's equipment will mean either equipment directly owned by the DBE as evidenced by title, bill of sale or other such documentation, or leased by the DBE, and over which the DBE has control as evidenced by the leasing agreement from a firm not owned in whole or part by the prime Contractor or an affiliate of the Contractor under this contract.

VDOT will monitor the Contractor's DBE involvement during the performance of the contract. However, VDOT is under no obligation to warn the Contractor that a DBE's participation will not count toward the goal.

DBEs Must Perform a Useful and Necessary Role in Contract Completion: A DBE does not perform a commercially useful function if the DBE's role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation.

DBEs Must Perform The Contract Work With Their Own Workforces: If a DBE does not perform and exercise responsibility for at least thirty (30) percent of the total cost of the DBE's contract with the DBE's own work force, or the DBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involve, VDOT will presume that the DBE is not performing a CUF and such participation will not be counted toward the contract goal.

VDOT Makes Final Determination On Whether a CUF Is Performed: VDOT has the final authority to determine whether a DBE firm has performed a CUF on a federal-aid contract. To determine whether a DBE is performing or has performed a CUF, VDOT will evaluate the amount of work subcontracted by that DBE firm or performed by other firms and the extent of the involvement of other firms' forces and equipment. Any DBE work performed by the Contractor or by employees or equipment of the Contractor shall be subject to disallowance under the DBE Program, unless the independent validity and need for such an arrangement and work is demonstrated.

J. Verification of DBE Participation and Imposed Damages

Within fourteen days after contract execution, the Contractor shall submit to the Responsible Engineer, with a copy to the District Civil Rights Office (DCRO), a fully executed subcontract agreement for each DBE used to claim credit in accordance with the requirements stated on Form C-112. The subcontract agreement shall be executed by both parties stating the work to be performed, the details or specifics concerning such work, and the price which will be paid to the DBE subcontractor. Because of the commercial damage that the Contractor and its DBE subcontractor could suffer if their subcontract pricing, terms, and conditions were known to competitors, the Department staff will treat subcontract agreements as proprietary Contractor trade secrets with regard to Freedom of Information Act requests. In lieu of subcontract agreements, purchase orders may be submitted for haulers, suppliers, and manufacturers. These too, will be treated confidentially and protected. Such purchase orders must contain, as a minimum, the following information: authorized signatures of both parties; description of the scope of work to include contract item numbers, quantities, and prices; and required federal contract provisions.

The Contractor shall also furnish, and shall require each subcontractor to furnish, information relative to all DBE involvement on the project for each quarter during the life of the contract in

which participation occurs and verification is available. The information shall be indicated on Form C-63, DBE and SWAM Payment Compliance Report. The department reserves the right to request proof of payment via copies of cancelled checks with appropriate identifying notations. Failure to provide Form C-63 to the District Civil Rights Office (DCRO) within five (5) business days after the reporting period may result in delay of approval of the Contractor's monthly progress estimate for payment. The names and certification numbers of DBE firms provided by the Contractor on the various forms indicated in this Special Provision shall be exactly as shown on the DMBE's or MWAA's latest list of certified DBEs. Signatures on all forms indicated herein shall be those of authorized representatives of the Contractor as shown on the Prequalification Application, Form C-32 or the Prequalification/Certification Renewal Application, Form C-32A, or authorized by letter from the Contractor. If DBE firms are used which have not been previously documented with the Contractor's bid and for which the Contractor now desires to claim credit toward the project goal, the Contractor shall be responsible for submitting necessary documentation in accordance with the procedures stipulated in this Special Provision to cover such work prior to the DBE beginning work.

Form C-63 can be obtained from the VDOT website at: *http://vdotforms.vdot.virginia.gov/*

The Contractor shall submit to the Responsible Engineer its progress schedule with a copy to the DCRO, as required by Section 108.03 of the Specifications or other such specific contract scheduling specification that may include contractual milestones, i.e., monthly or VDOT requested updates. The Contractor shall include a narrative of applicable DBE activities relative to work activities of the Contractor's progress schedule, including the approximate start times and durations of all DBE participation to be claimed for credit that shall result in full achievement of the DBE goal required in the contract.

On contracts awarded on the basis of good faith efforts, narratives or other agreeable format of schedule information requirements and subsequent progress determination shall be based on the commitment information shown on the latest Form C-111 as compared with the appropriate Form C-63.

Prior to beginning any major component or quarter of the work, as applicable, in which DBE work is to be performed, the Contractor shall furnish a revised Form C-111 showing the name(s) and certification number(s) of any current DBEs not previously submitted who will perform the work during that major component or quarter for which the Contractor seeks to claim credit toward the contract DBE goal. The Contractor shall obtain the prior approval of the Department for any assistance it may provide to the DBE beyond its existing resources in executing its commitment to the work in accordance with the requirements listed in the **Good Faith Efforts Described** section of this Special Provision. If the Contractor is aware of any assistance beyond a DBE's existing resources that the Contractor, or another subcontractor, may be contemplating or may deem necessary and that have not been previously approved, the Contractor shall submit a new or revised narrative statement for VDOT's approval prior to assistance being rendered.

If the Contractor fails to comply with correctly completing and submitting any of the required documentation requested by this provision within the specified time frames, the Department will withhold payment of the monthly progress estimate until such time as the required submissions are received VDOT. Where such failures to provide required submittals or documentation are repeated the Department will move to enjoin the Contractor and any prime contractual affiliates, as in the case of a joint venture, from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects until such submissions are received.

K. Documentation Required for Semi-final Payment

On those projects nearing completion, the Contractor must submit Form C-63 marked "Semi-Final" within twenty (20) days after the submission of the last regular monthly progress

estimate to the DCRO. The form must include each DBE used on the contract work and the work performed by each DBE. The form shall include the actual dollar amount paid to each DBE for the accepted creditable work on the contract. The form shall be certified under penalty of perjury, or other applicable law, to be accurate and complete. VDOT will use this certification and other information available to determine applicable DBE credit allowed to date by VDOT and the extent to which the DBEs were fully paid for that work. The Contractor shall acknowledge by the act of filing the form that the information is supplied to obtain payment regarding a federal participation contract. A letter of certification, signed by both the prime Contractor and appropriate DBEs, will accompany the form, indicating the amount, including any retainage, if present, that remains to be paid to the DBE(s).

L. Documentation Required for Final Payment

On those projects that are complete, the Contractor shall submit a final Form C-63 marked "Final" to the DCRO, within thirty (30) days of the final estimate. The form must include each DBE used on the contract and the work performed by each DBE. The form shall include the actual dollar amount paid to each DBE for the creditable work on the contract. VDOT will use this form and other information available to determine if the Contractor and DBEs have satisfied the DBE contract goal percentage specified in the contract and the extent to which credit was allowed. The Contractor shall acknowledge by the act of signing and filing the form that the information is supplied to obtain payment regarding a federal participation contract.

M. Prompt Payment Requirements

The Contractor shall make prompt and full payment to the subcontractor(s) of any retainage held by the prime Contractor after the subcontractor's work is satisfactorily completed.

For purposes of this Special Provision, a subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished, documented, and accepted as required by the contract documents by VDOT. When VDOT has made partial acceptance of a portion of the prime contract, the Department will consider the work of any subcontractor covered by that partial acceptance to be satisfactorily completed. Payment will be made in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

Upon VDOT's payment of the subcontractor's portion of the work as shown on the monthly progress estimate and the receipt of payment by the Contractor for such work, the Contractor shall make compensation in full to the subcontractor for that portion of the work satisfactorily completed and accepted by the Department. For the purposes of this Special Provision, payment of the subcontractor's portion of the work shall mean the Contractor has issued payment in full, less agreed upon retainage, if any, to the subcontractor for that portion of the subcontractor's work that VDOT paid to the Contractor on the monthly progress estimate.

The Contractor shall make payment of the subcontractor's portion of the work within seven (7) days of the receipt of payment from VDOT in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

If the Contractor fails to make payment for the subcontractor's portion of the work within the time frame specified herein, the subcontractor shall contact the Responsible Engineer and the Contractor's bonding company in writing. The bonding company and VDOT will investigate the cause for non-payment and, barring mitigating circumstances that would make the subcontractor ineligible for payment, ensure payment in accordance with the requirements of Section 107.01, Section 109.08, and Section 109.09 of the Specifications.

By bidding on this contract, and by accepting and executing this contract, the Contractor agrees to assume these contractual obligations, and to bind the Contractor's subcontractors contractually to those prompt payment requirements.

Nothing contained herein shall preclude the Contractor from withholding payment to the subcontractor in accordance with the terms of the subcontract in order to protect the Contractor from loss or cost of damage due to a breach of agreement by the subcontractor.

N. Miscellaneous DBE Program Requirements

Loss of DBE Eligibility: When a DBE firm has been removed from eligibility as a certified DBE firm, the following actions will be taken:

1. When a Bidder/Contractor has made a commitment to use a DBE firm that is not currently certified, thereby making the Contractor ineligible to receive DBE participation credit for work performed, and a subcontract has not been executed, the ineligible DBE firm does not count toward either the contract goal or overall goal. The Contractor shall meet the contract goal with a DBE firm that is eligible to receive DBE credit for work performed, or must demonstrate to the Contract Engineer that it has made good faith efforts to do so.

2. When a Bidder/Contractor has executed a subcontract with a certified DBE firm prior to official notification of the DBE firm's loss of eligibility, the Contractor may continue to use the firm on the contract and shall continue to receive DBE credit toward its DBE goal for the subcontractor's work.

3. When VDOT has executed a prime contract with a DBE firm that is certified at the time of contract execution but that is later ruled ineligible, the portion of the ineligible firm's performance on the contract before VDOT has issued the notice of its ineligibility shall count toward the contract goal.

Termination of DBE: If a certified DBE subcontractor is terminated, or fails, refuses, or is unable to complete the work on the contract for any reason, the Contractor must promptly request approval to substitute or replace that firm in accordance with this section of this Special Provision.

The Contractor, as aforementioned in **DBE Program-Related Certifications Made by Bidders/Contractors**, shall notify VDOT in writing before terminating and/or replacing the DBE that was committed as a condition of contract award or that is otherwise being used or represented to fulfill DBE contract obligations during the contract performance period. Written consent from the Department for terminating the performance of any DBE shall be granted only when the Contractor can demonstrate that the DBE is unable, unwilling, or ineligible to perform its obligations for which the Contractor sought credit toward the contract DBE goal. Such written consent by the Department to terminate any DBE shall concurrently constitute written consent to substitute or replace the terminated DBE with another DBE. Consent to terminate a DBE shall not be based on the Contractor's ability to negotiate a more advantageous contract with another subcontractor whether that subcontractor is, or is not, a certified DBE.

1. All Contractor requests to terminate, substitute, or replace a certified DBE shall be in writing, and shall include the following information:

   (a) The date the Contractor determined the DBE to be unwilling, unable, or ineligible to perform.

(b) The projected date that the Contractor shall require a substitution or replacement DBE to commence work if consent is granted to the request.

(c) A brief statement of facts describing and citing specific actions or inaction by the DBE giving rise to the Contractor's assertion that the DBE is unwilling, unable, or ineligible to perform;

(d) A brief statement of the affected DBE's capacity and ability to perform the work as determined by the Contractor;

(e) A brief statement of facts regarding actions taken by the Contractor which are believed to constitute good faith efforts toward enabling the DBE to perform;

(f) The current percentage of work completed on each bid item by the DBE;

(g) The total dollar amount currently paid per bid item for work performed by the DBE;

(h) The total dollar amount per bid item remaining to be paid to the DBE for work completed, but for which the DBE has not received payment, and with which the Contractor has no dispute;

(i) The total dollar amount per bid item remaining to be paid to the DBE for work completed, but for which the DBE has not received payment, and over which the Contractor and/or the DBE have a dispute.

2. Contractor's Written Notice to DBE of Pending Request to Terminate and Substitute with another DBE.

   The Contractor shall send a copy of the "request to terminate and substitute" letter to the affected committed DBE firm, in conjunction with submitting the request to the DCRO. The affected DBE firm may submit a response letter to the Department within two (2) business days of receiving the notice to terminate from the Contractor. The affected DBE firm shall explain its position concerning performance on the committed work. The Department will consider both the Contractor's request and the DBE's response and explanation before approving the Contractor's termination and substitution request, or determining if any action should be taken against the Contractor.

   If, after making its best efforts to deliver a copy of the "request to terminate and substitute" letter, the Contractor is unsuccessful in notifying the affected DBE firm, the Department will verify that the affected, committed DBE firm is unable or unwilling to continue the contract. The Department will immediately approve the Contractor's request for a substitution.

3. Proposed Substitution of Another Certified DBE

   Upon termination of a DBE, the Contractor shall use reasonable good faith efforts to replace the terminated DBE. The termination of such DBE shall not relieve the Contractor of its obligations pursuant to this section, and the unpaid portion of the terminated DBE's contract will not be counted toward the contract goal.

   When a DBE substitution is necessary, the Contractor shall submit an amended Form C-111 with the name of another DBE firm, the proposed work to be performed by that firm, and the dollar amount of the work to replace the unfulfilled portion of the work of the originally committed DBE firm. The Contractor shall furnish all pertinent information including the contract I.D. number, project number, bid item, item description, bid unit and

bid quantity, unit price, and total price. In addition, the Contractor shall submit documentation for the requested substitute DBE as described in this section of this Special Provision.

Should the Contractor be unable to commit the remaining required dollar value to the substitute DBE, the Contractor shall provide written evidence of good faith efforts made to obtain the substitute value requirement. The Department will review the quality, thoroughness, and intensity of those efforts. Efforts that are viewed by VDOT as merely superficial or pro-forma will not be considered good faith efforts to meet the contract goal for DBE participation. The Contractor must document the steps taken that demonstrated its good faith efforts to obtain participation as set forth in the **Good Faith Efforts Described** section of this Special Provision.

Factors Used to determine if a DBE Trucking Firm is performing a CUF:

The following factors will be used to determine whether a DBE trucking company is performing a CUF:

1. To perform a CUF the DBE trucking firm shall be completely responsible for the management and supervision of the entire trucking operation for which the DBE is responsible by subcontract on a particular contract. There shall not be a contrived arrangement, including, but not limited to, any arrangement that would not customarily and legally exist under regular construction project subcontracting practices for the purpose of meeting the DBE contract goal;

2. The DBE must own and operate at least one fully licensed, insured, and operational truck used in the performance of the contract work. This does not include a supervisor's pickup truck or a similar vehicle that is not suitable for and customarily used in hauling the necessary materials or supplies;

3. The DBE receives full contract goal credit for the total reasonable amount the DBE is paid for the transportation services provided on the contract using trucks the DBE owns, insures, and operates using drivers that the DBE employs and manages;

4. The DBE may lease trucks from another certified DBE firm, including from an owner-operator who is certified as a DBE. The DBE firm that leases trucks from another DBE will receive credit for the total fair market value actually paid for transportation services the lessee DBE firm provides on the contract;

5. The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees, *not to exceed the value of transportation services provided by DBE-owned trucks on the contract.* For additional participation by non-DBE lessees, the DBE will only receive credit for the fee or commission it receives as a result of the lease arrangement.

EXAMPLE

DBE Firm X uses two (2) of its own trucks on a contract. The firm leases two (2) trucks from DBE Firm Y and six (6) trucks from non-DBE Firm Z.

Firm X		**Value of Trans. Serv.** (For Illustrative Purposes Only)
Truck 1	Owned by DBE	$100 per day
Truck 2	Owned by DBE	$100 per day

Firm Y

Truck 1	Leased from DBE	$110 per day
Truck 2	Leased from DBE	$110 per day

Firm Z

Truck 1	Leased from Non DBE	$125 per day
Truck 2	Leased from Non DBE	$125 per day
Truck 3	Leased from Non DBE	$125 per day
Truck 4	Leased from Non DBE	$125 per day
Truck 5	Leased from Non DBE*	$125 per day
Truck 6	Leased from Non DBE*	$125 per day

DBE credit would be awarded for the total transportation services provided by DBE Firm X and DBE Firm Y, and may also be awarded for the total value of transportation services by four (4) of the six (6) trucks provided by non-DBE Firm Z (not to exceed the value of transportation services provided by DBE-owned trucks).

Credit = 8 Trucks
Total Value of Transportation Services = $820

In all, full DBE credit would be allowed for the participation of eight (8) trucks (twice the number of DBE trucks owned and leased) and the dollar value attributable to the Value of Transportation Services provided by the 8 trucks.

* With respect to the other two trucks provided by non-DBE Firm Z, DBE credit could be awarded only for the fees or commissions pertaining to those trucks that DBE Firm X receives as a result of the lease with non-DBE Firm Z.

6. For purposes of this section, the lease must indicate that the DBE firm leasing the truck has exclusive use of and control over the truck. This will not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, provided the lease gives the DBE absolute priority for and control over the use of the leased truck. Leased trucks must display the name and identification number of the DBE firm that has leased the truck at all times during the life of the lease.

Data Collection: In accordance with 49CFR Section 26.11, all firms bidding on prime contracts and bidding or quoting subcontracts on federal-aid projects shall provide the following information to the Contract Engineer annually.

- Firm name
- Firm address
- Firm's status as a DBE or non-DBE
- The age of the firm and
- The annual gross receipts of the firm

The means of transmittal and the risk for timely receipt of this information shall be the responsibility of the bidder. However, the above information can be submitted by means of the Annual Gross Receipts Survey as required in the Prequalification/Certification application.

All bidders, including DBE prime Contractor bidders, shall complete and submit to the Contract Engineer the Subcontractor/Supplier Solicitation and Utilization Form C-48 for each bid submitted; to be received within ten (10) business days after the bid opening. Failure of bidders to submit this form in the time frame specified may be cause for disqualification of the bidder and rejection of their bid in accordance with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge specifications.

O. Suspect Evidence of Criminal Behavior

Failure of a bidder, Contractor, or subcontractor to comply with the Virginia Department of Transportation Road and Bridge Specifications and these Special Provisions wherein there appears to be evidence of criminal conduct shall be referred to the Attorney General for the Commonwealth of Virginia and/or the FHWA Inspector General for criminal investigation and, if warranted, prosecution.

Suspected DBE Fraud

In appropriate cases, VDOT will bring to the attention of the U. S. Department of Transportation (USDOT) any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g., referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules provided in 49CFR Part 31.

P. Summary of Remedies for Non-Compliance with DBE Program Requirements

Failure of any bidder\Contractor to comply with the requirements of this Special Provision for Section 107.15 of the Virginia Road and Bridge Specifications, which is deemed to be a condition of bidding, or where a contract exists, is deemed to constitute a breach of contract shall be remedied in accordance with the following:

1. Disadvantaged Business Enterprise (DBE) Program Requirements

The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award, administration, and performance of this contract. Failure by the Contractor to carry out these requirements is a material breach of this contract, which will result in the termination of this contract or other such remedy, as VDOT deems appropriate.

All administrative remedies noted in this provision are automatic unless the Contractor exercises the right of appeal within the required timeframe(s) specified herein.

2. DBE Program-Related Certifications Made by Bidders\Contractors

Once awarded the contract, the Contractor shall comply fully with all regulatory and contractual requirements of the USDOT DBE Program, and that each certified DBE firm participating in the contract shall fully perform the designated work items with the DBE's own forces and equipment under the DBE's direct supervision, control, and management. Where a contract exists and where the Contractor, DBE firm, or any other firm retained by the Contractor has failed to comply with federal or VDOT DBE Program regulations and/or their requirements on that contract, VDOT has the authority and discretion to determine the extent to which the DBE contract requirements have not been met, and will

assess against the Contractor any remedies available at law or provided in the contract in the event of such a contract breach.

3. Disqualification of Bidder

Bidders may be disqualified from bidding for failure to comply with the requirements of this Special Provision, the contract specifications, and VDOT Road and Bridge Specifications.

4. Bidding Procedures

The failure of a bidder to submit the required documentation within the timeframes specified in the **Contract Goal, Good Faith Efforts Specified** section of this Special Provision may be cause for rejection of that bidder's bid. If the lowest bidder is rejected for failure to submit required documentation in the specified time frames, the Department may either award the work to the next lowest bidder, or re-advertise and construct the work under contract or otherwise as determined by the Commonwealth.

In order to award a contract to a bidder that has failed to meet DBE contract goal requirements, VDOT will determine if the bidder's efforts were adequate good faith efforts, and if given all relevant circumstances, those efforts were to the extent a bidder actively and aggressively seeking to meet the requirements would make. Regardless of the DBE contract goal participation level proposed by the bidder or the extent of good faith efforts shown, all bidders shall timely and separately file their completed and executed Forms C-111, C-112, C-48, and Form C-49, as aforementioned, or face potential bid rejection. If a bidder does not submit it's completed and executed C-111, or C-112, when required by this Special Provision, the bidder's bid will be considered non-responsive and may be rejected. If, after reconsideration, the Department determines the bidder has failed to meet the requirements of the contract goal and has failed to make adequate good faith efforts to achieve the level of DBE participation as specified in the bid proposal, the bidder's bid will be rejected. If sufficient documented evidence is presented to demonstrate that the apparent low bidder made reasonable good faith efforts, the Department will award the contract and reduce the DBE requirement to the actual commitment identified by the lowest successful bidder at the time of its bid. The Contractor is encouraged to seek additional participation during the life of the contract.

If the Contractor fails to conform to the schedule of DBE participation as shown on the progress schedule, or at any point at which it is clearly evident that the remaining dollar value of allowable credit for performing work is insufficient to obtain the scheduled participation, the Contractor and any aforementioned affiliates may be enjoined from bidding for 60 days or until such time as conformance with the schedule of DBE participation is achieved. In such instances, the Contractor is expected to seek DBE participation towards meeting the goal during the prosecution of the contract.

If the Contractor fails upon completion of the project to meet the required participation, the Contractor and any prime contractual affiliates, as in the case of a joint venture, may be enjoined from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects for a period of 90 days.

Prior to enjoinment from bidding or denial to participate as a subcontractor for failure to comply with participation requirements, as provided hereinbefore, the Contractor may submit documentation to the State Construction Engineer to substantiate that failure was due solely to quantitative underrun(s) or elimination of items subcontracted to DBEs, and that all feasible means have been used to obtain the required participation. The State

Construction Engineer upon verification of such documentation shall make a determination whether or not the Contractor has met the requirements of the contract.

If it is determined that the aforementioned documentation is insufficient or the failure to meet required participation is due to other reasons, the Contractor may request an appearance before the Administrative Reconsideration Panel to establish that all feasible means were used to meet such participation requirements. The decision of the Administrative Reconsideration Panel shall be administratively final. The enjoinment period will begin upon the Contractor's failure to request a hearing within the designated time frame or upon the Administrative Reconsideration Panel's decision to enjoin, as applicable.

5. Verification of DBE Participation and Imposed Damages

If the Contractor fails to comply with correctly completing and submitting any of the required documentation requested by this provision within the specified time frames, the Department will withhold payment of the monthly progress estimate until such time as the required submissions are received by VDOT. Where such failures to provide required submittals or documentation are repeated the Department will move to enjoin the Contractor and any prime contractual affiliates, as in the case of a joint venture, from bidding as a prime Contractor, or participating as a subcontractor on VDOT projects until such submissions are received.

In addition to the remedies described heretofore in this provision VDOT also exercises its rights with respect to the following remedies:

Suspect Evidence of Criminal Behavior

Failure of a bidder, Contractor, or subcontractor to comply with the Virginia Department of Transportation Road and Bridge Specifications and these Special Provisions wherein there appears to be evidence of criminal conduct shall be referred to the Attorney General for the Commonwealth of Virginia and/or the FHWA Inspector General for criminal investigation and, if warranted prosecution.

In appropriate cases, VDOT will bring to the attention of the U. S. Department of Transportation (USDOT) any appearance of false, fraudulent, or dishonest conduct in connection with the DBE program, so that USDOT can take the steps, e.g., referral to the Department of Justice for criminal prosecution, referral to the USDOT Inspector General, action under suspension and debarment or Program Fraud and Civil Penalties rules provided in 49CFR Part 31.

Section 107.16(a) **Erosion and Siltation** of the Specifications is amended to replace the fourth paragraph with the following:

For projects that disturb 10,000 square feet or greater of land or 2,500 square feet or greater in Tidewater, Virginia, the Contractor shall have within the limits of the project during land disturbance activities, an employee certified by the Department in Erosion and Sediment control who shall inspect erosion and siltation control devices and measures for proper installation and operation and promptly report their findings to the Inspector. Inspections shall include all areas of the site disturbed by construction activity and all off site support facilities covered by the project's Stormwater Pollution Prevention Plan. Inspections shall be conducted at least once every 14 calendar days and within 48 hours following any runoff producing storm event (Note: If an inspection is conducted as a result of a storm event, another inspection is not required for 14 calendar days following provided there are no more runoff producing storm events during the that period). For those areas that have been temporarily stabilized or runoff is unlikely to occur due to winter conditions (e.g., the site is covered with snow or ice or frozen ground exists), inspections

shall be conducted at least once a month. Those definable areas where final stabilization has been achieved will not require further inspections provided such areas have been identified in the project's Stormwater Pollution Prevention Plan. Failure of the Contractor to maintain a certified employee within the limits of the project will result in the Engineer suspending work related to any land disturbing activity until such time as a certified employee is present on the project. Failure on the part of the Contractor to maintain appropriate erosion and siltation control devices in a functioning condition may result in the Engineer notifying the Contractor in writing of specific deficiencies. Deficiencies shall be corrected immediately. If the Contractor fails to correct or take appropriate actions to correct the specified deficiencies within 24 hours after receipt of such notification, the Department may do one or more of the following: require the Contractor to suspend work in other areas and concentrate efforts towards correcting the specified deficiencies, withhold payment of monthly progress estimates, or proceed to correct the specified deficiencies and deduct the entire cost of such work from monies due the Contractor. Failure on the part of the Contractor to maintain a Department certified erosion and sediment control employee within the project limits when land disturbance activities are being performed will result in the Engineer suspending work related to any land disturbance activity until such time as the Contractor is in compliance with this requirement.

Section 107.16(e) **Storm Water Pollution Prevention Plan** of the Specifications is replaced with the following:

(e) **Storm Water Pollution Prevention Plan and Virginia Stormwater Management Program General Permit for the Discharge of Stormwater from Construction Activities**

A Stormwater Pollution Prevention Plan (c) identifies potential sources of pollutants which may reasonably be expected to affect the stormwater discharges from the construction site and any off site support areas and describes and ensures implementation of practices which will be used to reduce pollutants in such discharges.

The SWPPP is comprised of, but not limited to, the Erosion and Sediment Control (ESC) Plan, the Stormwater Management (SWM) Plan and related Specifications and Standards contained within all contract documents and shall be required for all land-disturbing activities that disturb 10,000 square feet or greater, or 2,500 square feet or greater in Tidewater, Virginia.

Land-disturbing activities that disturb one acre or greater, or 2,500 square feet or greater in an area designated as a Chesapeake Bay Preservation Area, require coverage under the Department of Conservation and Recreation's Virginia Stormwater Management Program (VSMP) General Permit for the Discharge of Stormwater from Construction Activities (hereafter referred to as the VSMP Construction Permit). Where applicable, the Department will apply for and retain coverage under the VSMP Construction Permit for those land disturbing activities for which it has contractual control.

The required contents of a SWPPP for those land disturbance activities requiring coverage under the VSMP Construction Permit are found in Section II D of the General Permit section of the VSMP Regulations (4VAC50-60-1170). While a SWPPP is an important component of the VSMP Construction Permit, it is only one of the many requirements that must be addressed in order to be in full compliance with the conditions of the permit.

The Contractor and all other persons that oversee or perform activities covered by the VSMP Construction Permit shall be responsible for reading, understanding, and complying with all of the terms, conditions and requirements of the permit and the project's SWPPP including, but not limited to, the following:

1. Project Implementation Responsibilities

The Contractor shall be responsible for the installation, maintenance, inspection, and, on a daily basis, ensuring the functionality of all erosion and sediment control measures and all other stormwater and pollutant runoff control measures identified within or referenced within the SWPPP, plans, Specifications, permits, and other contract documents.

The Contractor shall take all reasonable steps to prevent or minimize any stormwater or non-stormwater discharge that will have a reasonable likelihood of adversely affecting human health or public and/or private properties.

2. Certification Requirements

In addition to satisfying the personnel certification requirements contained herein, the Contractor shall certify his activities by completing, signing, and submitting Form C-45 VDOT SWPPP Contractor and Subcontractor Certification Statement to the Engineer at least 7 days prior to commencing any project related land-disturbing activities, both on-site and off-site.

3. SWPPP Requirements for Support Facilities

Where not included in the plans, the Contractor shall develop erosion and sediment control plan(s) and stormwater pollution prevention plan(s) for submission and acceptance by the Engineer prior to usage of any on-site or off-site support facilities including but not limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle storage and fueling areas, storage areas for fertilizers or chemicals, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction process. Such plans shall document the location and description of potential pollutant sources from these areas and shall include a description of the controls to reduce, prevent and control pollutants from these sources including spill prevention and response. The Contractor shall submit such plans and documentation as specified herein to the Engineer and, upon review and approval, they shall immediately become a component of the project's SWPPP and VSMP Construction Permit (where applicable) and shall be subject to all conditions and requirements of the VSMP Construction Permit (where applicable) and all other contract documents.

4. Reporting Procedures

a. Inspection Requirements

The Contractor shall be responsible for conducting inspections in accordance with the requirements herein. The Contractor shall document such inspections by completion of Form C-107 (a) and (b), Construction Runoff Control Inspection Form and Continuation Sheet, in strict accordance with the directions contained within the form.

b. Unauthorized Discharge Requirements

The Contractor shall not discharge into state waters sewage, industrial wastes, other wastes or any noxious or deleterious substances nor shall otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational or other public uses.

(1) Notification of non-compliant discharges

The Contractor shall immediately notify the Engineer upon the discovery of or potential of any unauthorized, unusual, extraordinary, or non-compliant discharge from the land disturbing activity. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.

(2) Detailed report requirements for non-compliant discharges

The Contractor shall submit to the Engineer within 5 days of the discovery of any actual or potential non-compliant discharge a written report describing details of the discharge to include its volume, location, cause, and any apparent or potential effects on private and/or public properties and state waters or endangerment to public health, as well as steps being taken to eliminate the discharge. A completed Form C-107 (a) and (b) shall be included in such reports.

5. Changes, Deficiencies and Revisions

a. Changes and Deficiencies

The Contractor shall report to the Engineer when any planned physical alterations or additions are made to the land disturbing activity or deficiencies in the project plans or contract documents are discovered that could significantly change the nature or increase the quantity of the pollutants discharged from the land disturbing activity to surface waters.

b. Revisions to the SWPPP

Where site conditions, construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan or any other component of the SWPPP for the land disturbing activity, such revisions or modifications shall be approved by the Engineer and shall be documented by the Contractor on a designated plan set (Record Set).

Such plans shall be maintained on the project site or at a location convenient to the project site where no on site facilities are available and shall be available for review upon request during normal business working hours.

Section 107.21—Size And Weight Limitations of the Specifications is amended to add the following:

(d) **Construction Loading of Structures:** In the course of planning and prosecuting the work for the asphalt maintenance schedules in the Contract, the Contractor shall consider the size and weight limitation of any existing structure(s) affecting the prosecuting the work in a schedule when contemplating construction loads, equipment access, haul and delivery routes of materials, and other related activities. If the size or weight limitation of an existing structure changes after the receipt of bid date for the Contract and remains so up to and including the actual prosecution of work for a schedule in the Contract, preventing or limiting access across the structure, and the Contractor determines this limitation impacts his operations; he shall notify the Engineer of such change. If the Engineer confirms such change has occurred, the change will be considered a change to the character of the work in accordance with the provisions of Section 104.03(a) of the Specifications and is eligible for adjustments in accordance with the provisions therein.

SECTION 108—PROSECUTION AND PROGRESS OF WORK

Section 108.01—Prosecution of the Work of the Specifications is amended to replace the first paragraph with the following:

The Contractor shall begin work on the Contract within 10 calendar days after the date selected by the Contractor as his Notice to Proceed date or within 10 calendar days after the specific Notice to Proceed date indicated in the Contract, unless otherwise altered or amended by specific language in the Contract or as permitted by the provisions of Section 105.01 or Section 108.02 of the Specifications.

Section 108.01—Prosecution Of Work is amended to add the following:

Once the Contractor has begun work on a given schedule or portion thereof he shall endeavor to prosecute such work fully and continuously in accordance with the details and requirements of the Contract to its completion. In the event the Contractor has to temporarily suspend the work on a given schedule or portion thereof he shall notify the Engineer at least 24 hours in advance of the time and date he plans to pull off the work site. Prior to leaving the work site, the Contractor shall ensure the work site has been properly and safely secured to protect the traveling public in accordance with the provisions of the *Virginia Work Area Protection Manual*, the *MUTCD*, Section 512 of the Specifications, and other requirements included in the Contract documents.

Section 108.02—Limitation of Operations of the Specifications is replaced with the following:

(a) **General**

The Contractor shall conduct the work in a manner and sequence that will ensure its expeditious completion with the least interference to traffic and shall have due regard for the location of detours and provisions for handling traffic. The Contractor shall not open any work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section of work before work is started on any other section.

The Contractor shall also be governed by the limitations of operations specified herein and elsewhere in the contract documents including but not limited to pavement and shoulder planing operations, pavement and shoulder paving operations, trench widening, shoulder rehabilitation and restoration, removal and placement of traffic control items, and maintaining traffic.

The Contractor shall also schedule work, for paving sites designated in the Contract, so that it is completed on or before the dates and time restrictions specified herein or elsewhere in the Contract.

(b) **Holidays**

Except as is necessary to maintain traffic, work shall not be performed on Sundays or the following holidays without the permission of the Engineer: **January 1, Easter, Memorial Day, July 4, Labor Day, Thanksgiving Day, and Christmas Day**.

If any of these holidays occurs on a Sunday, the following Monday shall be considered the holiday.

In addition to the Sunday or Holiday work limitations, mobile, short duration, short-term stationary, or intermediate-term stationary temporary traffic control zone (as defined in the *Virginia Work Area Protection Manual*) lane closures on mainline lanes, shoulders, or ramps shall not be performed during the following Holiday time periods without the <u>written</u> permission of the Engineer. Additionally, a long-term stationary temporary traffic control zone (as defined in the *Virginia Work Area Protection Manual*) shall not be initially put in place, adjusted, or removed during the following Holiday time periods without the <u>written</u> permission of the Engineer:

- **January 1**: From Noon on the preceding day until Noon on the following day, except as indicated below.
- **Easter**: As indicated below.
- **Memorial Day**: As indicated below.
- **July 4:** From Noon on the preceding day until Noon on the following day, except as indicated below.

- **Labor Day**: As indicated below.

- **Thanksgiving Day**: From Noon on the Wednesday preceding Thanksgiving Day until Noon on the Monday following Thanksgiving Day.

- **Christmas Day**: From Noon on the preceding day until Noon on the following day, except as indicated below.

If the Holiday occurs on a Friday or Saturday: From Noon on the preceding Thursday to Noon on the following Monday.

If the Holiday occurs on a Sunday or Monday: From Noon on the preceding Friday to Noon on the following Tuesday.

Section 108.04—Determination and Extension of Contract Time Limit of the Specifications is amended to replace the second paragraph with the following:

With a fixed date contract when contract execution is not within 60 calendar days after the opening of bids, or when the Contractor is unable to commence work because of any failure of the Department, or when the Contractor is delayed because of the fault of the Department, the Contractor will be given an extension of time based on the number of days delayed beyond the 60 calendar days. No time extension will be allowed for a delay in the date of contract execution when the delay is the fault of the Contractor.

Section 108.04(a) **Fixed Date** of the Specifications is amended to add the following after the first paragraph as currently written:

If the Contract identifies a contract-specific Notice to Proceed date and the Contract is not executed by that date, the Contractor will receive an extension of time equal to the number of days between the contract-specific Notice to Proceed date and the eventual date of contract execution. If the Notice to Proceed date is selected by the Contractor and after prior approval the Engineer directs the Contractor not to begin work on that date, the Contractor will receive an extension of time equal to the number of days between the Contractor's selected Notice to Proceed date and the eventual date the Engineer informs the Contractor that he may commence the work.

Section 108.07—Default of Contract of the Specifications is amended to replace condition (a) with the following:

(a) fails to begin the work under the Contract within 10 calendar days after the Contractor's selected Notice to Proceed date, or within 10 calendar days after a contract specific Notice to Proceed date indicated in the Contract, except as otherwise permitted by specific contract language or the provisions of Section 105.01 or Section 108.02 of the Specifications.

SECTION 109—MEASUREMENT AND PAYMENT

Section 109.01—Measurement by Weight of the Specifications is amended to replace the first paragraph and second paragraph including subparagraphs 1-4 with the following:

(a) **Measurement by Weight:** Materials that are measured or proportioned by weight shall be weighted on accurate scales as specified in this Section. When material is paid for on a tonnage basis, personnel performing the weighing shall be certified by the Department and shall be bonded to the Commonwealth of Virginia in the amount of $10,000 for the faithful observance and performance of the duties of the weighperson required herein. The bond shall be executed on a form having the exact wording as the Weighpersons Surety Bond Form furnished by the

Department and shall be submitted to the Department prior to the furnishing of the tonnage material.

The Contractor shall have the weighperson perform the following:

1. Furnish a signed weigh ticket for each load that shows the date, load number, plant name, size and type of material, project number, schedule or purchase order number, and the weights specified herein.

2. Maintain sufficient documentation so that the accumulative tonnage and distribution of each lot of material, by contract, can be readily identified.

3. Submit by the end of the next working day a summary of the number of loads and total weights for each type of material by contract.

Section 109.01(a)**—Measurement by Weight** of the Specifications is also amended to delete the third paragraph.

Section 109.01(d)4 **Asphalt** of the Specifications is amended to replace the "formula…used in computing the volume of asphalt at temperatures other than 60 degrees F" with the following:

$$V^1 = V \times [1 - K(T - 60)]$$

Section 109.08(b)**—Payment to Sub-Contractors** of the Specifications is amended to replace the second paragraph with the following:

Payment to Sub-Contractors shall be in accordance with the provisions of §2.2-4354 of the *Highway Laws of Virginia:*

The Contractor shall take one of the following two actions within 7 days after receipt of payment from the Department for the subcontractor's portion of the work as shown on the monthly progress estimate:

1. Pay the subcontractor for the proportionate share of the total payment received from the agency attributable to the work performed by the subcontractor under that contract; or

2. Notify the Department and subcontractor, in writing, of his intention to withhold all or a part of the subcontractor's payment with the reason for nonpayment.

The Contractor shall be obligated to pay interest in the amount 1 (one) percent per month on all amounts owed by the Contractor to the subcontractor that remain unpaid after 7 days following receipt by the contractor of payment from the Department for work performed by the subcontractor, except amounts withheld as allowed in section 2. The Contractor shall include in each of its subcontracts a provision requiring each subcontractor to include or otherwise be subject to the same payment and interest requirements with respect to each lower tier subcontractor.

Section 109.09—Payment For Material On Hand of the Specifications is replaced with the following:

When requested in writing by the Contractor, payment allowances may be made for material secured for use on the project. Such material payments will be for only those actual quantities identified in the contract, approved work orders, or otherwise **authorized and** documented **by the Engineer** as required to complete the project and shall be in accordance with the following terms and conditions:

(a) **Structural Steel or Reinforcing Steel:** An allowance of 100 percent of the cost to the Contractor for structural steel **or reinforcing steel** materials secured for fabrication not to

exceed 60 percent of the contract price may be made when such material is delivered to the fabricator and has been adequately identified for exclusive use on the project. **The provisions of this section for steel reinforcement will only apply where the quantity of steel reinforcement is identified as a separate and distinct bid item for payment.** An allowance of 100 percent of the cost to the Contractor for superstructure units and reinforcing steel, not to exceed 90 percent of the contract price, may be made when fabrication is complete. Prior to the granting of such allowances, the materials and fabricated units shall have been tested or certified and found acceptable to the Department and shall have been stored in accordance with the requirements specified herein. Allowances will be based on invoices, bills, or the estimated value as approved by the Engineer and will be subject to the retainage requirements of Section 109.08 of the Specifications. **For the purposes of this section fabrication is defined as any manufacturing process such as bending, forming, welding, cutting or coating with paint or anti-corrosive materials which alters, converts, or changes raw material for its use in the permanent finished work.**

(b) **Other Materials**: For aggregate, pipe, guardrail, signs and sign assemblies, and other nonperishable material, an allowance of 100 percent of the cost to the Contractor for materials, not to exceed 90 percent of the contract price, may be made when such material is delivered **to the project** and stockpiled or stored in accordance with the requirements specified herein. Prior to the granting of such allowances, the material shall have been tested and found acceptable to the Department. Allowances will be based on invoices, bills, or the estimated value of the material as approved by the Engineer and will be subject to the retainage provisions of Section 109.08 of the Specifications.

(c) **Excluded Items:** No allowance will be made for fuels, form lumber, falsework, temporary structures, or other work that will not become an integral part of the finished construction. **Additionally, no allowance will be made for perishable material such as cement, seed, plants, or fertilizer.**

(d) **Storage:** Material for which payment allowance is requested shall be stored in an approved manner in areas where damage is not likely to occur. If any of the stored materials are lost or become damaged, the Contractor shall repair or replace them **at no additional cost to the Department**. **Repair or replacement of such material will not be considered the basis for any extension of contract time.** If payment allowance has been made prior to such damage or loss, the amount so allowed or a proportionate part thereof will be deducted from the next progress estimate payment and withheld until satisfactory repairs or replacement has been made.

When it is determined to be impractical to store materials within the limits of the project, the Engineer may approve storage on private property or, for structural units and reinforcing steel, on the manufacturer's or fabricator's yard. Requests for payment allowance for such **stored** material shall be accompanied by a release from the owner or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the Commonwealth.

(e) **Materials Inventory**: If the Contractor requests a payment allowance for properly stored material, he shall submit a certified and itemized inventory statement to the Engineer no earlier than five days and no later than two days prior to the progress estimate date. The statement shall be submitted on forms furnished by the Department and shall be accompanied by **supplier's or manufacturer's** invoices or other documents that will verify the material's cost. Following the initial submission, the Contractor shall submit to the Engineer a monthly-certified update of the itemized inventory statement within the same time frame. The updated inventory statement shall show additional materials received and stored with invoices or other documents and shall list materials removed from storage since the last certified inventory statement, with appropriate cost data reflecting the change in the inventory. If the Contractor fails to submit the monthly-certified update within the specified

time frame, the Engineer will deduct the full amount of the previous statement from the progress estimate.

At the conclusion of the project, the cost of material remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
LOCATING, REMOVING AND DISPOSING OF RECESSED PAVEMENT MARKERS AND RAISED SNOW-PLOWABLE MARKERS

October 17, 2010

The Contractor shall locate, remove and dispose of existing recessed pavement markers and raised snow-plowable markers prior to resurfacing. The cavity left by the removal of the existing recessed pavement markers shall be cleaned of debris, filled with the approved mix for resurfacing and compacted.

Locating, removing and disposing of recessed pavement markers and raised snow-plowable markers; cleaning and filling the cavity, and compacting the material placed in the cleaned cavity will not be measured for payment. The cost for performing this work shall be included in the price bid for other appropriate items of work.

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S315LM2-0211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SURFACE PREPARATION AND RESTORATION PRIOR TO PLANT MIX OVERLAY

February 2, 2011

I. DESCRIPTION

This work shall consist of removing deteriorated pavement, cleaning the area and repairing with the appropriate asphalt mixes in areas designated by the Engineer. This work is applicable only to the routes or areas designated to be overlaid in this contract and where the Engineer has authorized the limits for preparation and restoration. This preparation and restoration will be accomplished prior to the overlay paving operation. After the preparation, the Contractor will be responsible for maintaining the prepared surface until the overlay has been completed.

Definitions: For the purpose of the Specifications surface preparation is defined as the following:

TYPE I - A localized disintegration of the pavement, including distorted areas, no more than 5 inches in depth and no more than 20 square feet in surface area.

TYPE II - A localized disintegration of pavement, including distorted areas, no more than 5 inches in depth and more than 20 square feet in surface area.

TYPE III - A localized disintegration more than 5 inches in depth, limits of surface area as defined by the Engineer.

II. MATERIALS

Surface preparation and restoration material shall be as follows:

For 0-2 inches - use surface mix

For 2-5 inches - use intermediate mix

For greater than 5 inches - use base mix or intermediate mix

Tack coat shall conform to the requirements of Section 210 of the Specifications.

III. PROCEDURES

The Engineer will designate the limits of surface area for preparation and restoration to be achieved prior to beginning the work.

Areas designated for surface preparation and restoration shall be thoroughly cleaned, unsuitable material removed and edges shaped to vertical sides prior to applying tack coat.

A tack coat shall be applied to all exposed surfaces of the area which will receive asphalt material.

The Contractor shall utilize the mix and type of asphalt for surface preparation and restoration in accordance with Section II Materials that he shall use with that route's overlay. Asphalt material shall be placed in lifts of no more than 3 inches in depth. After leveling each lift, it shall be compacted with an approved mechanical tamper or other approved method. Care shall be taken to ensure the surface of the finished repaired area conforms to the grade of the surrounding pavement.

IV. MEASUREMENT AND PAYMENT

When the bid proposal contains a pay item, corresponding to any of the types below, specified in the "Schedule of Items"; that type of surface preparation and restoration will include the work designated in the corresponding type's description and be paid for in accordance with the price designated by the bidder. If the bid proposal contains no pay item for the type of surface preparation and restoration as described herein, such as may be discovered in the field; that surface preparation and restoration shall meet the definition of Section I and will be measured and paid for in accordance with the following:

Surface Preparation and Restoration Type I will be measured in tons of asphalt material and paid for at the rate of three times the contract unit bid price per ton of the mix type(s) of asphalt authorized by the Engineer. This price shall include removing and disposing of unsuitable material, preparing the area, furnishing and applying tack coat, furnishing and applying asphalt material, and compaction.

Surface Preparation and Restoration Type II will be measured in tons of asphalt material and paid for at the rate of four times the contract unit bid price per ton of the mix type(s) of asphalt authorized by the Engineer. This price shall include removing and disposing of unsuitable material, preparing the area, furnishing and applying tack coat, furnishing and applying asphalt material, and compaction.

Surface Preparation and Restoration Type III will be measured in tons of asphalt material and paid for at the rate of five times the contract unit bid price per ton of the mix type(s) of asphalt authorized by the Engineer. This price shall include removing and disposing of unsuitable material, preparing the area, furnishing and applying tack coat, furnishing and applying asphalt material, and compaction.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SEALING CRACKS IN ASPHALT CONCRETE SURFACES OR HYDRAULIC CEMENT CONCRETE PAVEMENT

August 1, 2010

I. DESCRIPTION

This Specification covers the cleaning and sealing of cracks with Type A material for pavements which will not be overlaid with asphalt concrete (AC) within one year. Type B material shall be used to fill cracks in AC surfaces or hydraulic cement pavement (HCC) joints or cracks that will be overlaid within one year. Type C material shall be used to fill cracks in AC surfaces that may or may not be overlaid within one year. The Contract will designate which sites are to use each material.

In addition, this Specification covers the routing (Type C only), cleaning and sealing of cracks in existing surfaces including, but not limited to, cracks along the longitudinal joint(s) between lanes. Cracks ranging in width from 1/8 inch to 1 ½ inches shall be sealed. Cracks that exceed 1 ½ inches are not included in this contract.

II. MATERIALS

All sealant materials shall be certified or tested and approved by the Department before being incorporated into the work. Where installation procedures or any part thereof are required to be in accordance with recommendations of the manufacturer of sealant compounds, the Contractor shall submit catalogue data and copies of recommendations to the Engineer prior to installation of the materials for review and approval. All such recommendations shall be adhered to unless directed otherwise by the Engineer.

TYPE A

The crack sealant shall be of the following type and shall meet all the requirements of ASTM D-6690 and exceed all requirements of AASHTO M-173 and Federal Specification SS-S-164:

A HOT-POURED MODIFIED ASPHALT RUBBER WITH GRANULATED CRUMB RUBBER AND LATEX PLASTICIZERS. The proportions of the materials, by weight, shall be up to 80 percent maximum asphalt and up to 25 percent maximum crumb rubber.

The crumb rubber shall be 100 percent vulcanized rubber and meet the following gradation requirement:

Sieve	Percent Passing
No. 10	100%
No. 40	0-40%

TYPE B

Type B material shall consist of PG 70-22 and polyester fibers from the Materials Division *Manual of Instructions* approved list of Stabilizers for Asphalt Mixtures (fibers only). The Contractor shall provide the PG 70-22 suppliers data for heating. Fibers shall not exceed 5 percent by weight. Fiber loading will be determined at the project site in order to minimize/eliminate the need for over banding as described. The fiber loading will be approved by the Engineer.

TYPE C

Type C material shall consist of PG 70-22 and polyester fibers from the Materials Division Manual of Instructions approved list of Stabilizers for Asphalt Mixtures (fibers only) at 5 percent by weight. The Contractor shall provide the PG 70-22 suppliers data for heating.

III. EQUIPMENT

Proper sealing equipment must be used for the specific material listed in accordance with the manufacturer's recommendations for the Sealant specified. The equipment for hot applied sealant compounds shall be a melting kettle of double boiler, indirect heating type, using oil as a heat-transfer medium. The kettle shall have an effective mechanically operated agitator, a re-circulation pump and shall be equipped with a positive thermostatic temperature control which shall be checked for calibration before beginning work. The unit shall be capable of maintaining the specified mixing temperature within 10 degrees F. Manufacturer's recommendations for mixing and application temperatures shall be followed with the latter being measured at the nozzle of the applicator wand. Overheating or direct heating of the sealant material shall not be permitted. The hoses, connectors and applicator wand shall all be insulated.

IV. CONSTRUCTION

The sealant shall not be placed when the ambient or pavement temperatures fall below 45 degrees F, or when moisture is present in the crack to be sealed.

Prior to sealing, cracks shall be thoroughly cleaned as approved by the Engineer using an oil free hot air blasting heat lance capable of a velocity of 3000 fps at 3000 degrees F. Cracks shall be cleaned such that all dirt, debris, moisture and other foreign materials that will prevent bonding of the sealant are removed to a minimum depth of 1 inch. All foreign material (i.e., dirt, grass, rocks) shall be removed from the pavement to prevent re-contamination of the crack. Cracks shall be completely dry before sealing. Any crack not meeting the approval of the Engineer shall be re-cleaned and dried.

The sealant shall be pumped directly into the crack from the heater-melter unit at the temperature specified by the manufacturer **immediately following the cleaning of each crack**. Cracks shall be sealed in the following manner as approved by the Engineer:

TYPE A - Cracks shall be filled from the bottom up in a continuous manner such that the crack is completely filled level with the pavement surface, and the sealant shall overlay the crack at the pavement surface leaving a maximum “over-banded" appearance of 1-inch wide on each side of the crack. The material shall not continue to flow beyond these limits once a crack is sealed. The height of the sealant above the pavement surface shall not exceed 1/8 inch. For this method of sealing, the applicator wand shall be equipped with a shoe that will produce the extruded over-band as well as completely fill the crack.

TYPE B - Cracks shall be filled from the bottom up in a continuous manner such that the crack is completely filled level with the pavement surface. The sealant may overlay the surface on each side of the by no more than ½ inch or leave a no “over-banded" appearance. The material shall not continue to flow beyond these limits once a crack is sealed. The height of the sealant above the pavement surface shall not exceed 1/8 inch. For this method of sealing, the applicator wand shall be equipped with a shoe that will minimize the extruded over-band as well as completely fill the crack.

TYPE C – Prior to sealing, the cracks shall be routed to a minimum depth of 1 inch and to a minimal width of ½ inch. Cracks shall be filled from the bottom up in a continuous manner such that the crack is completely filled level with the pavement surface, and the sealant shall

overlay the crack at the pavement surface leaving a no “over-banded" appearance. The material shall not continue to flow beyond these limits once a crack is sealed. The height of the sealant above the pavement surface shall not exceed 1/8 inch.

Prior to the start of each day’s operation, the applicator wand and hose shall be heated per the equipment manufacturer’s recommendations and the material in the heater-melter unit re-circulated.

The applicator wand shall be returned to the mixing unit and the sealant material re-circulated immediately upon completion of each crack sealing.

Any crack in hydraulic cement concrete pavement which cannot be filled due to the sealant draining into a large void, shall be plugged with a suitable material (i.e. backer rod) approved by the Engineer prior to the project, and then filled. After being plugged, recleaning of the crack may be required prior to filling with sealant.

During the heating and application of the crack sealing material, the temperature of the material shall be measured and recorded on two hour intervals by the Contractor. For Type A material, the material shall never be heated over 420 degrees F. For Type B and C material, the material shall not be heated above 375 degrees F. Any material heated above these temperatures shall be discarded (i.e. all material in the heater-melter unit) and not paid for by the Department. Additionally, if the material becomes lumpy or has poor flow at elevated temperature, then the material shall be discarded (i.e. all material in the heater-melter unit) and not paid for by the Department.

Traffic shall be kept off the pavement surface until the crack sealant has cured to the point it will not track or be distorted by traffic. The Contractor shall replace, at his or her expense, any sealant that pulls out within 96 hours after opening the pavement to traffic.

V. METHOD OF MEASUREMENT

METHOD A – CONVERSION APPROACH

Sealant for cracks or joints will be measured by the pound. At the beginning of each workday, the Engineer, or his or her appointed representative, shall measure the amount of material in the heater-melter unit and log all additional material added during the day, and measure the amount of material remaining in the heater-melter to determine the total poundage used for that day. No payment will be made for waste material.

For the purpose of converting the liquid material in the heater-melter unit from gallons to pounds, the Contractor shall use a calibrated measuring rod to determine the actual quantity of material in gallons, and same shall be converted to pounds taking into consideration the temperature of the material at the time of measurement. A chart or other approved conversion method furnished by the sealant material manufacturer/supplier shall be used to perform the conversion from gallons to pounds.

METHOD B – DIRECT MEASUREMENT APPROACH

Sealant for cracks or joints will be measured by the pound. At the beginning of each workday, the Contractor shall provide the Engineer the certified weight of the heater-melter unit. During the day’s operation, the Engineer will log all additional material added to the heater-melter unit. At the end of the day’s operation, the Contractor shall provide the Engineer the certified weight of the heater-melter unit including the unused material in the heater-melter unit. The Engineer will determine the pounds of material applied for payment purposes. No payment will be made for waste material.

VI. BASIS OF PAYMENT

TYPE A and B

Crack Sealant/Filler will be paid for at the contract unit price per pound, which price shall be full compensation for providing the sealant/filler, complete-in-place, including cleaning and sealing the cracks and for all tools, labor, equipment, materials and incidentals related fully completing the installation.

TYPE C

Crack /Sealant/Filler will be paid for at the contract unit price per pound, which price shall be full compensation for providing the sealant/filler, complete-in-place, including routing, cleaning and sealing the cracks and for all tools, labor, equipment, materials and incidentals related fully completing the installation.

Payment will be made under:

Pay Item	Pay Unit
Crack Sealant/Filler (Type A)	Pound
Crack Sealant/Filler (Type B)	Pound
Crack Sealant/Filler (Type C)	Pound

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
NONTRACKING TACK COAT

October 5, 2010c

I. DESCRIPTION

This work shall consist of preparing and treating an existing asphalt or concrete surface with asphalt in accordance with the requirements of these specifications and in conformity with the lines shown on the plans or as established by the Engineer.

II. MATERIALS

Liquefied asphalt materials for non-tracking tack coat must be on the Department's list of approved non-tracking tack coat materials. Non-tracking tack coat materials shall not be diluted with water.

III. PROCEDURES

Nontracking Tack will be required only between May 1 and October 1. Tack coat, in accordance with Section 310 of the Specifications, may be used at other times.

Equipment for heating and applying asphalt shall conform to the requirements of Section 314.04(b) of the Specifications or the non-tracking tack coat material's manufacturer's recommendations. The maximum application temperature of liquefied asphalt shall conform to the manufacturer's requirements.

The existing surface shall be patched when necessary, cleaned, and rendered free from irregularities to the extent necessary to provide a reasonably smooth and uniform surface. Unstable corrugated or deteriorated areas of existing pavement shall be removed and replaced with suitable patching materials. The edges of existing pavements that will be adjacent to new pavement shall be thoroughly cleaned to permit adhesion of asphalt.

Tack material shall be uniformly applied with a pressure distributor conforming to the requirements of Section 314.04(b) of the Specifications. Hand spray equipment shall not be used except in areas inaccessible by a pressure distributor. The tack material shall be applied at a rate recommended by the manufacturer. This rate is typically between 0.05 to 0.10 gallons per square yard. The asphalt tack shall be applied to the pavement surface in such a manner that it will bond the overlay and the underlying surfaces together.

Application of tack at joints, adjacent to curbs, gutters, or other appurtenances shall be uniformly applied with a hand wand or with a spray bar at the rate of 0.2 gallon per square yard.

The tack coat shall be applied in a manner to offer the least inconvenience. All traffic, including construction traffic, shall be excluded from sections treated with non-tracking tack until the tack has cured and will no longer track onto adjacent non-treated areas.

The tack coat shall be applied in accordance with the same weather limitations that apply to the course being placed as well as the manufacturer's recommendations. The quantity, rate of application, temperature, and areas to be treated shall be approved by the Engineer prior to application of the tack coat.

Adjacent concrete or asphalt concrete surfaces shall show minimal visible evidence and white or yellow pavement markings shall show no visible evidence of tracking of the asphalt tack material

at the end of the production shift. Tracking of the tack material on pavement markings will require the Contractor to immediately restore the marking to their original pre-tack condition. Build-up of the tacking material on existing pavement surfaces shall be removed by the Contractor.

During the application of non-tracking asphalt tack coat, care shall be taken to prevent spattering adjacent items or vehicular traffic. The distributor shall not be cleaned or discharged into ditches or borrow pits, onto shoulders, or along the right of way. When not in use, application equipment shall be parked so that the spray bar or mechanism will not drip asphalt on the surface of the traveled way.

IV. REFEREE SYSTEM

When the new asphalt course is placed on a milled or non-milled surface, the Contractor shall take steps to ensure an adequate bond between the new material and existing surface. If the Engineer suspects the Contractor is failing to apply good bond promoting procedures or adequately tacking the existing surface per the manufacturer's recommendations, the Department may core a minimum of 6 locations to determine the shear and tensile strength at the interface. These locations will be determined through a stratified random selection process. Cores will be tested in the Department's laboratory in accordance with the procedures described in report VTRC 09-R21. For the surface to be acceptable, the average results for shear and tensile strength must be met. A minimum of 3 cores will be tested for shear and 3 cores for tensile strength. The average shear strength must meet or exceed 100 psi with no single core having a shear strength less than 50 psi on a milled surface. The average shear strength must meet or exceed 50 psi with no single core having a shear strength less than 30 psi on a non-milled surface. The average tensile strength of the remaining cores must meet or exceed 40 psi with no single core having a tensile strength less than 20 psi on a milled surface. The average tensile strength of the remaining cores must meet or exceed 30 psi with no single core having a tensile strength less than 20 psi on a non-milled surface. In the event the minimum shear or tensile strength requirements are not met, then payment for the asphalt concrete tonnage placed in the area in dispute shall be reduced by 10 percent.

V. MEASUREMENT AND PAYMENT

Nontracking tack coat, the cost thereof, shall be included in the price for other appropriate pay items.

Patching will be paid for at the contract unit price for the various items used unless a reconditioning item is included in the Contract.

VI. REFERENCES

McGhee, K.K , and Clark, T.M. *Bond Expectations for Milled Surfaces and Typical Tack Coat Materials Used in Virginia*. VTRC 09-R21. Virginia Transportation Research Council, Charlottesville, 2009.

S515B02-1212

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
COLD PLANING (MILLING) ASPHALT CONCRETE OPERATIONS

October 1, 2012

I. DESCRIPTION

This provision shall govern cold planing (milling) asphalt concrete operations in preparation for pavement repair and/or pavement overlay. Cold planing or milling of asphalt concrete pavement shall be performed according to Section 515 of the Specifications and the requirements herein.

II. GENERAL PROCEDURES

The Contractor is permitted to perform either regular pavement planing or performance pavement planing to the contract specified depth or as directed by the Engineer in order to provide a uniform sound substrate prior to paving roadways designated in the schedules according to Section 315, the requirements herein or elsewhere in the Contract documents.

When the Contractor elects to performance plane on roadways specified to be planed to a depth of 2 inches or less, the Contractor shall performance plane only that amount of pavement which can be paved back within 14 calendar days of completion of planing the roadway or portion of roadway. The Contractor is required to perform pavement surface testing as specified in Section 515.04 of the Specifications to verify he has achieved the acceptable surface texture specified in that Section prior to opening the performance planed surface to traffic. The additional traffic control devices and signage required for the 14 calendar day pave back operation allowance for performance planing operations versus the traffic control devices required for 96 hour pave back operations for regular pavement planing operations shall be at the Contractor's expense.

Limitations of operations for planing shall be performed according to the requirements of Section 108.02 of the Specifications, other Contract specific requirements and as specified herein.

Where appropriate according to contract requirements and site specific conditions, the existing asphalt concrete layers shall be planed to permit the transition of the top course of the asphalt concrete overlay according to the details of the ACOT-1 Standard. Any sub-courses termination may be notched into the existing pavement or blended with the next course of pavement.

The Contractor will not be permitted to plane a portion of the width of a travel lane, ramp, loop or shoulder and leave it unpaved and open to traffic. Abutting shoulders may also be planed during single and multiple lane planing operations. Planing operations shall be planned and performed to maintain positive drainage according to the requirements of Section 315.05(c) of the Specifications.

Where the depth of planing designated in the Contract or directed by the Engineer is 2 inches or less, the Contractor shall have the option of planing the abutting lane or shoulder on alternate days or squaring up the planing operation at the end of each work shift. However, abutting lanes or shoulders shall be planed and squared up regardless of planing depth prior to holidays or any temporary shutdowns.

In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations and such emergency or unforeseen circumstance within his control prevents the Contractor from squaring up the planed surface on adjacent lanes prior to a holiday or temporary shutdown, any additional signage, traffic control

devices or temporary markings or markers required to protect the traveling public shall be the Contractor's responsibility and at his expense.

Where the depth of planing designated in the Contract or directed by the Engineer is greater than 2 inches in the Contract documents, the Contractor shall square up the planing operation at the end of each workday or plane adjacent lanes including abutting shoulders within the same day for the length of that day's planing operation.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes, the Contractor shall provide advance warning signage and traffic control devices to inform the traveling public according to the details provided in the Contract for the scope of operation he is performing. The cost for such advance warning signage and traffic control devices shall be included in the cost of other appropriate items.

III. ROADWAY CLASSIFICATION LIMITATIONS

The following restrictions, based on the type of roadway, shall apply:

A. Roadways with Posted Speed Limit of 55 Mph or Greater

Performance planing may be performed in multiple lanes across the entire widths of the lanes up 4 miles of travel lane unless otherwise stated in the Contract. Performance planed surfaces must be paved back within 14 calendar days from the start of the performance planing operation.

Where the Contractor decides to performance plane multiple lanes, the Contractor shall be responsible for furnishing and installing advance warning signage and traffic control devices to inform the traveling public according to the details provided in the Contract. Temporary pavement markings required by such operations will be handled according to the requirements of Section 704.03 and the *Special Provision for* ***TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS*** included in the Contract. The cost for such warning devices and advance signage required by multiple lane planing operations shall be included in the cost of other appropriate items unless otherwise specified in the contract by a specific pay item(s) for separate payment.

Ramps and exits shall be planed in such a manner that a longitudinal joint is not left for vehicles to cross within the posted speed limits in a "run on" situation (approaching a higher elevation surface difference of greater than 1 inch). To prevent this, the Contractor can 1.) plane ramps and exits to the extent that the joint line between new and existing pavement crossed by traffic is traversed at an angle close to ninety degrees per the ACOT-1 Standard for temporary transverse joints or 2.) perform tapered planing along the ramp/exit longitudinal joint to provide a smooth transition for vehicles to cross or 3.) square up ramp or exit pavement with the adjacent mainline lane at the time of installation.

The following additional restrictions will also apply to roadways where regular pavement planing is applicable:

- On roadways with a combination of 4 or more lanes and shoulders (i.e. 2 or more travel lanes and 2 shoulders [each shoulder a minimum 6 feet wide]) in one direction, all travel lanes must be paved back before the weekend. Up to two thousand five hundred (2,500) feet of shoulder may be planed and left over the weekend provided the portion of planed shoulder left unpaved over the weekend is paved within 48 hours after the end of the weekend period.

- The Contractor shall pave all ramps and loops that have been regular planed during the week before the weekend.

B. All Other Roadways

If the Contractor elects to perform regular pavement planing he will be permitted to leave up to two miles of travel lane open to the traveling public provided such planing (milling) is performed across the entire lane width. These same length restrictions will apply in cases where multiple-lane regular pavement planing is permitted in the Contract or allowed by the Engineer. The Contractor will be limited in the case of regular pavement planing, whether in a single lane or multiple lane operation, to only that amount of pavement that can be paved back within 96 hours of completion of planing that roadway or portion of roadway.

When the Contractor elects to performance plane on roadways specified to be planed to a depth of 2 inches or less, the Contractor shall plane only the amount of pavement that can be paved back within 14 calendar days of completion of planing that roadway or portion of roadway. The Contractor is required to perform pavement surface testing as specified in Section 515.04 of the Specifications to verify he has achieved the acceptable surface texture prior to opening the performance planed surface to traffic. The additional traffic control devices and signage required for the 14 calendar day pave back operation allowance for performance planing operations versus the traffic control devices required for 96 hour pave back operations for regular pavement planing operations shall be at the Contractor's expense.

Roadways on which the roadway edges (i.e. edge milling) are to be planed shall be paved back within 10 days from the completion of the planing operation.

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 515—PLANING OR MILLING PAVEMENT

SECTION 515—PLANING PAVEMENT of the Specifications is completely replaced with the following:

SECTION 515—PLANING OR MILLING PAVEMENT

515.01—Description

This work shall consist of planing (milling) of rigid or flexible pavement to the designated depth specified in the plans or other Contract documents in preparation for pavement repair or pavement overlay. For the purposes of this section, rigid pavement shall mean hydraulic cement concrete pavement or hydraulic cement concrete surfaced pavements. Flexible pavement shall mean asphalt concrete or asphalt concrete surface pavements. Planing as used herein is also referred to as milling or grinding. Milled cuttings shall be removed and disposed of by the Contractor in accordance with the requirements of Section 106.04 of the Specifications or used in the work if permitted in the Contract or directed by the Engineer.

515.02—Equipment

Planing shall be performed with a pavement planing or pavement grinding machine of a type that has operated successfully on work comparable to that specified in the Contract. Milling and cold planing equipment shall be capable of accurately cutting to the length, width, depth and typical section specified in the Contract in flexible pavement or rigid pavement while leaving a uniformly cut or ground roadway surface capable of handling traffic prior to overlay placement. The milling equipment shall not damage the underlying pavement surface. The milling machine shall be equipped with an automatic grade control system that will control the longitudinal profile and cross slope of the existing pavement milled surface as the milling operations proceed. The ground speeds of the machine and the cutting equipment shall be independent. The machine shall have a self-contained water system for the control of dust and fine particles. The width of the machine shall allow for the passage of controlled public traffic while in use. The machine shall have a dust collection system or have a system to minimize dust created by the planing (milling) operation from escaping into the atmosphere.

The Contractor shall continuously monitor the cutting or grinding head of the machine so as to ensure and maintain the creation of a uniformly textured milled surface. Equipment and vehicles in use under traffic shall be equipped according to the requirements of the Work Area Protection Manual.

515.03—Procedures

Limitations of operations for planing operations shall be in accordance with the requirements of Section 108.02 of the Specifications and as specified in the Contract.

The Contractor may perform either regular planing or performance based planing at his option unless otherwise specified in the Contract. Unless otherwise directed by the Engineer, the finished surface for regular pavement planing and performance planing shall have a tolerance of plus or minus 1/4 inch per foot between any two contacts of the resultant surface and the testing edge of a 10-foot straightedge.

No application of pavement overlay shall decrease the vertical clearance under a bridge. In situations where the existing pavement under the overpass cannot be planed in direct proportion

to the proposed overlay, the new pavement is to be tied down to the existing pavement under the overpass no less than 75 feet from the outer edges of the overpass in accordance with Standards.

The finished surface macrotexture for performance planing shall have a pavement macrotexture MTD (mean texture depth) of less than 2.0 millimeters. Testing for performance pavement planing shall be as described hereinafter.

Irregularities and high spots of existing pavement shall be eliminated. The pavement surface shall be milled, ground or planed to the designated grade or gradient as specified on the plans, or where not specified as a grade, shall parallel that of the existing roadway. Transversely, the cross slopes of tangent sections shall be planed to approximately 1/4 inch per foot or as directed by the Engineer. Superelevated curves shall be planed as directed by the Engineer. Where the pavement is to be resurfaced by means of the application of an overlay on curb and gutter roadways, a 1-inch shoulder shall be cut along the gutter line to eliminate the necessity of feathering the edge of the new surface. Payment for providing the 1-inch shoulder shall be based on the total square yards of removed material regardless of the variable depth of the pass.

The finished planed surface shall be true to grade, free from gouges, grooves, ridges, soot, oil film, and other imperfections and shall have a uniformly textured appearance suitable as a temporary riding surface.

Humps and depressions that exceed the specified tolerances and require additional grinding or planing will be subject to correction or replacement as directed by the Engineer at no additional cost to the Department.

The Contractor shall ensure positive drainage is provided for all planed surfaces in accordance with the requirements of Section 315.05(c) of the Specifications. When planing curb and gutter sections the Contractor shall endeavor to work with existing drainage and grades to maintain positive flow. In the event of significant buildup of standing water, the Contractor may be required to erect signage to warn motorists, sweep the roadway to vacate the water, or in extreme cases, close the lane to traffic until proper drainage of the planed surface can be restored.

Temporary transverse pavement-wedge tie-ins shall be constructed where planed existing pavement is to remain temporarily without overlay to the extent allowed or required herein, in Section 315 of the Specifications, elsewhere in the Contract documents, or by the Engineer. Each tie-in shall be constructed no less than 3 feet in length for every inch of depth of pavement planing performed and shall consist of a mix that is suitable for a riding surface that provides a smooth transition between planed existing pavement and existing pavement or bridge decks. Such tie-ins shall be constructed prior to the planed surface being opened to traffic.

When planing to a depth of 2 inches or less at a bridge, the planed (milled) surface at the bridge may be left unpaved for up to 10 days.

Additional or other limitations and conditions to planing operations will be as specified and applicable to the Contract.

515.04—Performance Pavement Planing Testing

This section gives testing procedures and criteria for opening a section of performance planed pavement to public traffic on roadways with posted speed limits of 55 mph or greater as specified herein. The test procedure performed by the Contractor shall measure the mean texture depth (MTD) of the resultant macrotexture surface after performance planing operations have been completed. The measurement for performance planed surface texture shall be conducted in accordance with the requirements of ASTM E965 using a volumetric technique. The Contractor shall randomly select 10 locations at each site. Each individual location shall be tested and the

average MTD of the entire 10 locations per site determined. Prior to opening a lane or roadway to traffic the average MTD of the performance planed site shall be less than 2.0 millimeters and the upper limit for any one MTD measurement shall not exceed 3.10 millimeters in order for that site to be exposed to traffic.

515.05—Measurement and Payment

Where pavement is to be planed to a uniform depth, planing will be measured in square yards of removed pavement of the surface area to the depth(s) specified in the contract documents. The Engineer may direct the depth to be adjusted during the initial pass ± ½ inch due to field conditions at no additional cost, except where such adjustment constitutes a changed condition as explained herein. The planed area is defined as the actual length and width of the planed pavement surface visually verified and accepted by the Engineer for payment. If scabbing or laminations still exist after planing to the maximum potential depth of the initial pass, the Engineer may direct the Contractor to perform additional passes or to increase the depth beyond the maximum potential depth of the initial pass***.*** Such additional passes or increased depth beyond the maximum potential depth of the initial pass will also be measured and paid for in square yards for the depth authorized by the Engineer. Such additional depth passes (beyond the maximum potential depth of the original pass) will not be adjusted, as in averaging or as a percentage of original depth or maximum potential depth of the initial pass, to achieve final measurement or payment. In the event the authorized adjustment of the ½ inch for field conditions by the Engineer changes the requirements of the "square up" provisions (in excess of 2 inches), this will be considered a changed condition in accordance with the provisions of Section 104.02 of the Specifications.

Where planing is variable depth and used to tie into existing structures such as curbs and combination curb and gutters and at bridges, except in cases as mentioned below, such tie-in planing will be measured in square yards of removed pavement for the full surface area (the actual length and width of the planed pavement surface visually verified and accepted by the Engineer for payment) within the range of depth specified in the contract documents. **Note:** The Engineer may direct the depth to be adjusted during the initial pass ± ½ inch of the specified depth due to field conditions such as scabbing or delamination at no additional cost, except where such adjustment constitutes a changed condition as explained herein.

If scabbing or laminations still exist after planing to the maximum potential depth of the initial tie-in planing pass, the Engineer may direct the Contractor to perform additional passes or to increase the depth beyond the maximum potential depth of the initial ***pass.*** Additional passes or depths beyond the maximum potential depth of the initial ***pass***, authorized by the Engineer, will also be measured and paid for in square yards of removed pavement of the additional surface area for the depth authorized by the Engineer. Areas of variable depth tie-in planing will not be adjusted, as in averaging or as a percentage of original depth, to achieve final measurement or payment. In the event the authorized adjustment of the ½ inch for field conditions by the Engineer changes the requirements of the "square up" provisions, this will be considered a changed condition in accordance with Section 104.02 of the Specifications.

Planing performed to tie-in overlaid pavement to existing pavement or bridge decks that is determined by the Engineer to be a part of the mainline planing operations will not be measured for separate payment, the cost of which, shall be included in the price bid for the appropriate depth range of flexible or rigid pavement planing.

This price shall include furnishing vehicles, labor, tools, materials, incidentals, safety equipment, warning devices, and removing and disposing of existing pavement.

Payment will be made under:

Pay Item	**Pay Unit**
Flexible pavement planing **(0-2” depth**)	Square yard
Flexible pavement planing (**Above 2”-4” depth**)	Square yard
Flexible pavement tie-in planing **(0-2” depth**)	Square yard
Flexible pavement tie-in planing (**Above 2”-4” depth**)	Square yard
Flexible pavement planing **(over 4” depth)**	Square yard
Rigid pavement planing **(0-2” depth)**	Square yard
Rigid pavement tie-in planing **(0-2” depth)**)	Square yard

S315NM4-1211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
PLACEMENT OF ASPHALT CONCRETE OVERLAYS

September 27, 2011

I. DESCRIPTION

This work shall consist of furnishing and placing asphalt concrete overlay pavement courses on existing roadway surfaces in accordance with the requirements herein and in conformity with the lines, grades, and thickness as established in the Contract or directed by the Engineer. This work shall be performed in accordance with the requirements of Section 211 and Section 315 of the Specifications, and where Stone Matrix Asphalt (SMA) is specified in the Contract, Sections 248 and 317 of the Specifications.

II. EQUIPMENT

Equipment for placing asphalt concrete overlay material shall be in accordance with the requirements of Section 315.03 of the Specifications and where Stone Matrix Asphalt (SMA) is specified, Section 317 of the Specifications.

III. PROCEDURES

Where pavement planing is required it shall be performed in accordance with the requirements of the Special Provision for Cold Planing (Planing) Asphalt Concrete Operations and Section 515 of the Specifications. No placement of an overlay or deck planing will be permitted on a bridge deck without the prior written approval of the District Bridge Engineer.

Limitations of operations for placing asphalt concrete overlay shall be in accordance with the requirements of Section 108.02 of the Specifications, the Contract requirements and as specified herein.

Prior to commencement of paving overlay operations the Contractor shall clean the existing pavement surface to the satisfaction of the Engineer of accumulated dust, mud, or other debris that may adversely affect the bond of the new overlay. In the event the thoroughness of the Contractor's efforts to clean the existing pavement is questionable, the Engineer may require the Contractor to perform a bond strength test in accordance with the referee system requirements in the Special Provision for Nontracking Tack Coat included in the Contract. The cost for cleaning and surface preparation shall be included in the bid price for the asphalt concrete.

The following will be corrected by the Engineer ahead of the Contractor's operations or included in the work performed by the Contractor. When such corrective work is performed by the Contractor, the work will be paid for as designated by the specific pay item(s) in the Contract:

- Pavement irregularities greater than 1 inch in depth shall be filled with a material approved by the Engineer.

- Pavement cracks or joints shall be cleaned and filled in accordance with the Special Provision for **SEALING CRACKS IN ASPHALT CONCRETE SURFACES OR HYDRAULIC CEMENT CONCRETE PAVEMENT**.

The Contractor shall remove thermoplastic and tape pavement markings and raised pavement markers prior to performing paving overlay operations. Thermoplastic and tape pavement markings shall be 90 percent removed so as not to interfere with bonding of pavement overlay or the transfer of existing marking thickness up through the overlay. In lieu of grinding to eradicate thermoplastic, the Contractor will be permitted to mechanically scrape off thermoplastic markings to a point where such markings are flush with the existing pavement surface employing adequate controls so as not to damage the affected pavement. This work shall be performed in accordance with the requirements of Section 512 and Section 704 of the Specifications except as otherwise permitted herein.

The Contractor shall protect and reference utility structures prior to paving in order to locate and adjust these structures, if necessary, after paving operations are completed. The protection and referencing of utility structures shall be at no cost to the Department.

Temporary transverse pavement-wedge tie-ins shall be constructed where pavement overlay operations are temporarily halted as allowed or required herein, in Section 315 of the Specifications, elsewhere in the contract documents, or by the Engineer. Each temporary tie-in shall be no less than 3 feet in length for every inch of depth of overlaid pavement and shall consist of a mix that is suitable as a surface mix asphalt to provide a smooth transition between the installed overlay and existing pavements or bridge decks. Such temporary tie-ins shall be constructed prior to the overlaid pavement being opened to traffic.

Final transverse pavement tie-ins shall be constructed to provide a smooth transition between newly overlaid pavement and existing pavements or bridge decks, and to existing pavement underneath bridge overpasses. Such tie-ins shall conform to the requirements of Standard Drawing ACOT-1 or Section 315.05(c) of the Specifications, as applicable, except that all joints at tie-in locations shall be tested using a 10-foot straightedge in accordance with the requirements of Section 315.07(a) of the Specifications. The variation from the testing edge of the straightedge between any two contact points with the pavement surface shall not exceed 1/4 inch. When planing is necessary at tie-ins to existing pavement or bridge decks to obtain the required overlay depth specified in the Contract; the existing pavement shall be planed in accordance with the requirements of the ACOT-1 Standard or the requirements mentioned herein.

No pavement overlay shall decrease the vertical clearance under a bridge. In situations where the pavement under the overpass cannot be planed in direct proportion to the overlay to be placed, the new pavement is to be tied down to the existing pavement under the overpass a minimum of 75 feet from the outer edges of the bridge overpass in accordance with Standard Drawing ACOT-1.

The ACOT-1 Standard for asphalt concrete overlay transitions shall apply when:

There is at least one inch of grade change between the finished asphalt concrete overlay surface and the existing pavement surface and where any of the following conditions exist:

a. Bridge decks or bridge overpasses are located within the site to receive the overlay.

b. Where the Contractor has to tie-in the top course of asphalt concrete overlay to an existing hydraulic concrete pavement surface.

c. Where the Contractor has to tie-in the top course of the asphalt concrete overlay to an existing asphalt concrete pavement surface <u>and planing is included in the Contract as pay item</u>.

When tying in the top course of the asphalt concrete overlay to an existing asphalt concrete pavement surface and there is no pay item in the Contract for planing, the asphalt concrete overlay tie-in shall conform to the requirements of Section 315.07 (a) of the Specifications

When the Special Provision for Rideability applies as specified in the Contract, a distance of 105 feet (0.02 of a mile), measured from the line of the tie in will be exempted from pay adjustment.

The following restrictions, based on the type of roadway, will apply:

Roadways with Posted Speed Limit of 55 Mph or Greater

The Contractor shall install asphalt concrete overlays to the depths specified for the specific routes identified in the Contract. Where asphalt concrete is being overlaid to a depth of 2 inches or less on roadways carrying traffic, the Contractor shall have the option of squaring up the overlay operation at the end of each workday or squaring up all travel lanes, excluding shoulders, before the weekend. Shoulders must be squared up within 48 hours after the weekend and prior to continuing mainline paving. All lanes including shoulders must be squared up before holidays or any temporary shutdowns.

Where overlays of more than 2 inches are being placed the Contractor shall square up the overlay operation at the end of each workday. This requirement shall apply to travel lanes and shoulders.

Asphalt concrete pavement overlay operations shall be performed in only one travel lane at a time. Under no circumstance will the Contractor be permitted to overlay a portion of the width of a travel lane, ramp or loop and leave it exposed to traffic.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes due to the overlay operations, the Contractor shall provide advance warning signage and traffic control devices in accordance with the details provided in the Contract to inform the traveling public for the scope of overlay operation he is performing. The cost for such advance warning devices and signage shall be included in the cost of other appropriate items. Temporary pavement markings required as a result of staging such operations will be measured and paid for in accordance with the Special Provision for **TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS** included in the Contract.

In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations that prevents the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend, a holiday or a temporary shutdown, any additional signage required to protect the traveling public shall be the Contractor's expense.

Ramps, exits and turn lanes are to be paved in such a manner that a longitudinal joint with a surface elevation of 1 inch or more between the existing pavement and the overlay (where the overlay is the higher of the two elevations) will not be left for vehicles to cross within the posted speed limits in a "run-on" situation. Ramps, exits and turn lanes are to be paved to the extent that the joint crossed by traffic is traversed at an angle close to 90 degrees (perpendicular), or the ramp, exit and turn lane shall be squared up with the adjacent mainline lane at the time of installation.

Only approved mixes that have been verified in accordance with the requirements of Section 211.03(f) of the Specifications and have met the requirement for roller pattern density shall be placed on limited access roadways.

The Contractor shall ensure positive drainage is provided for all overlaid surfaces in accordance with the requirements of Section 315.05(c) of the Specifications.

B. All Other Roadways

Where asphalt concrete is being overlaid to a depth of 2 inches or less on roadways carrying traffic, the Contractor shall have the option of squaring up the overlay operation at the end of each workday or squaring up all lanes including shoulders at least once every 4 consecutive workdays excluding weekends. All lanes including shoulders must be squared up before weekends, holidays or any temporary shutdowns.

Where overlays of more than 2 inches are being placed the Contractor shall square up the overlay operation at the end of each workday. This requirement shall apply to travel lanes and shoulders.

Asphalt concrete pavement overlay operations shall be performed in only one travel lane at a time. Under no circumstance will the Contractor be permitted to overlay a portion of the width of a travel lane, ramp or loop and leave it overnight.

Where uneven pavement joints exist either transversely or longitudinally at the edges of travel lanes due to the overlay operations, the Contractor shall provide advance warning signage and traffic control devices at his expense to inform the traveling public in accordance with the details provided in the Contract for the scope of overlay operation he is performing.

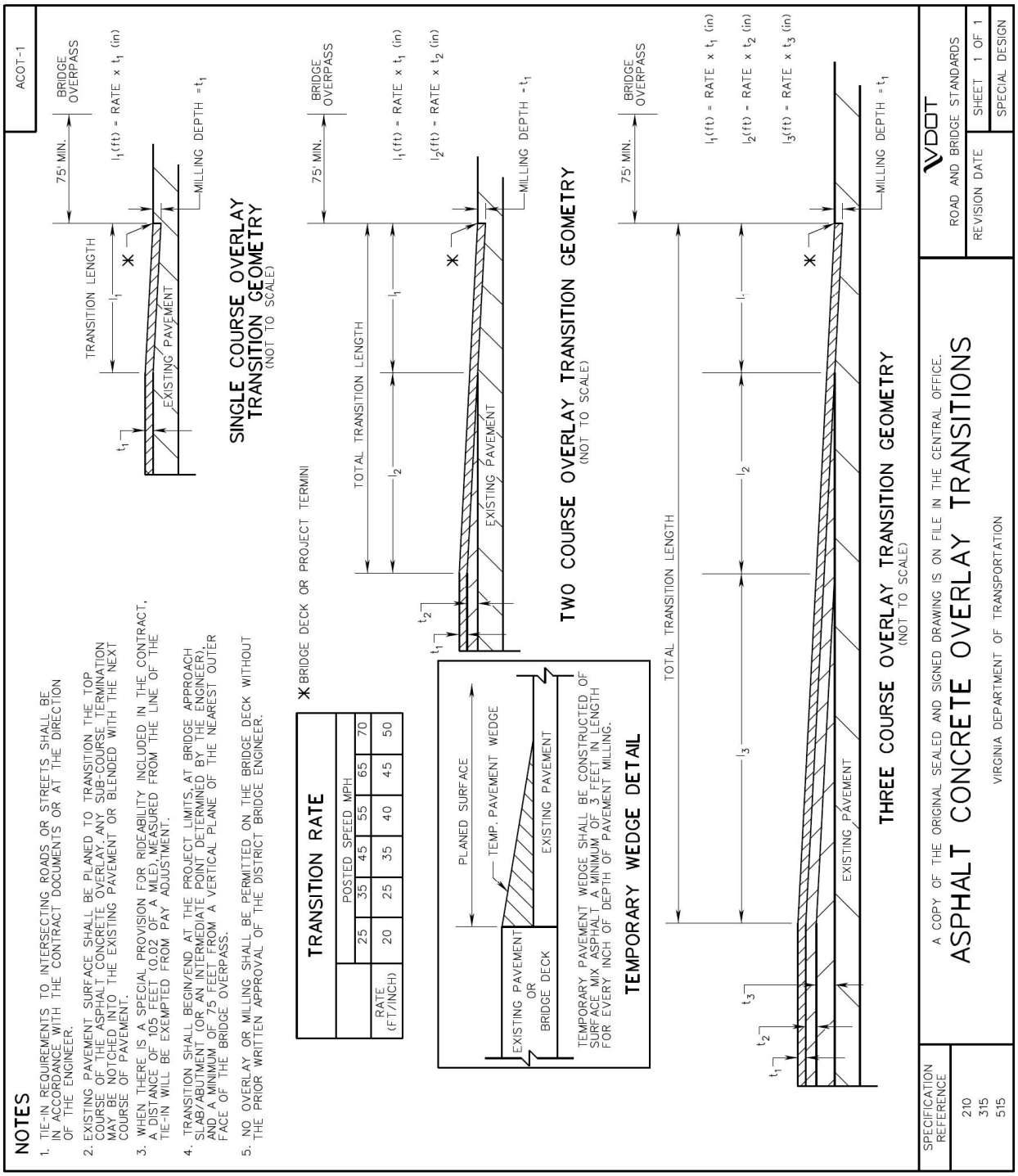
In the event an emergency or an unforeseen circumstance such as equipment failure or breakdown occurs during the Contractor's operations that prevents the Contractor from squaring up the overlaid surface on adjacent lanes prior to a weekend, a holiday or a temporary shutdown, any additional signage required to protect the traveling public shall be the Contractor's expense

Overlay tie-in requirements to intersecting roads or streets shall be in accordance with the Special Provision for LIMITS OF MAINLINE OVERLAY AT INTERSECTIONS TO PAVED ROADS.

The Contractor shall ensure positive drainage is provided for all overlaid surfaces in accordance with the requirements of Section 315.05(c) of the Specifications.

(STANDARD DRAWING ACOT-1 is attached)

(Attachment)
STANDARD DRAWING ACOT-1 December 2012



VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
LIMITS OF MAINLINE OVERLAY AT INTERSECTIONS TO PAVED ROADS

July 28, 2010

I. DESCRIPTION

This work shall consist of furnishing and placing asphalt concrete overlay pavement courses on existing paved roadway surfaces that intersect the mainline roadway pavement overlay. This work shall be performed in accordance with the requirements of the Special Provision for Placement of Asphalt Concrete Overlays, Sections 211 and 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Sections 248 and 317 of the Specifications; and as specified herein. Where pavement planing is required it shall be performed in accordance with the requirements of the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications and as specified herein.

II. MATERIALS

Materials shall be in accordance with the requirements of Section 211 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 248 of the Specifications; and the Special Provision for Placement of Asphalt Concrete Overlays.

III. EQUIPMENT

Equipment for furnishing and placing asphalt concrete overlay shall be in accordance with the requirements of Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications. Pavement planing equipment shall be in accordance with the requirements of the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications.

IV. PROCEDURES

Furnishing and placing asphalt concrete overlay shall be in accordance with the requirements of Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications. Where pavement planing is required, it shall be in accordance with the requirements of the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications and as specified herein.

The Contractor shall overlay the intersecting paved road from the edge of pavement of the mainline roadway pavement overlay to a point that includes the entire radius of the intersecting paved road in accordance with the attached drawing. This distance from the edge of pavement of the mainline roadway pavement overlay shall not exceed 50 feet measured in accordance with the drawing herein.

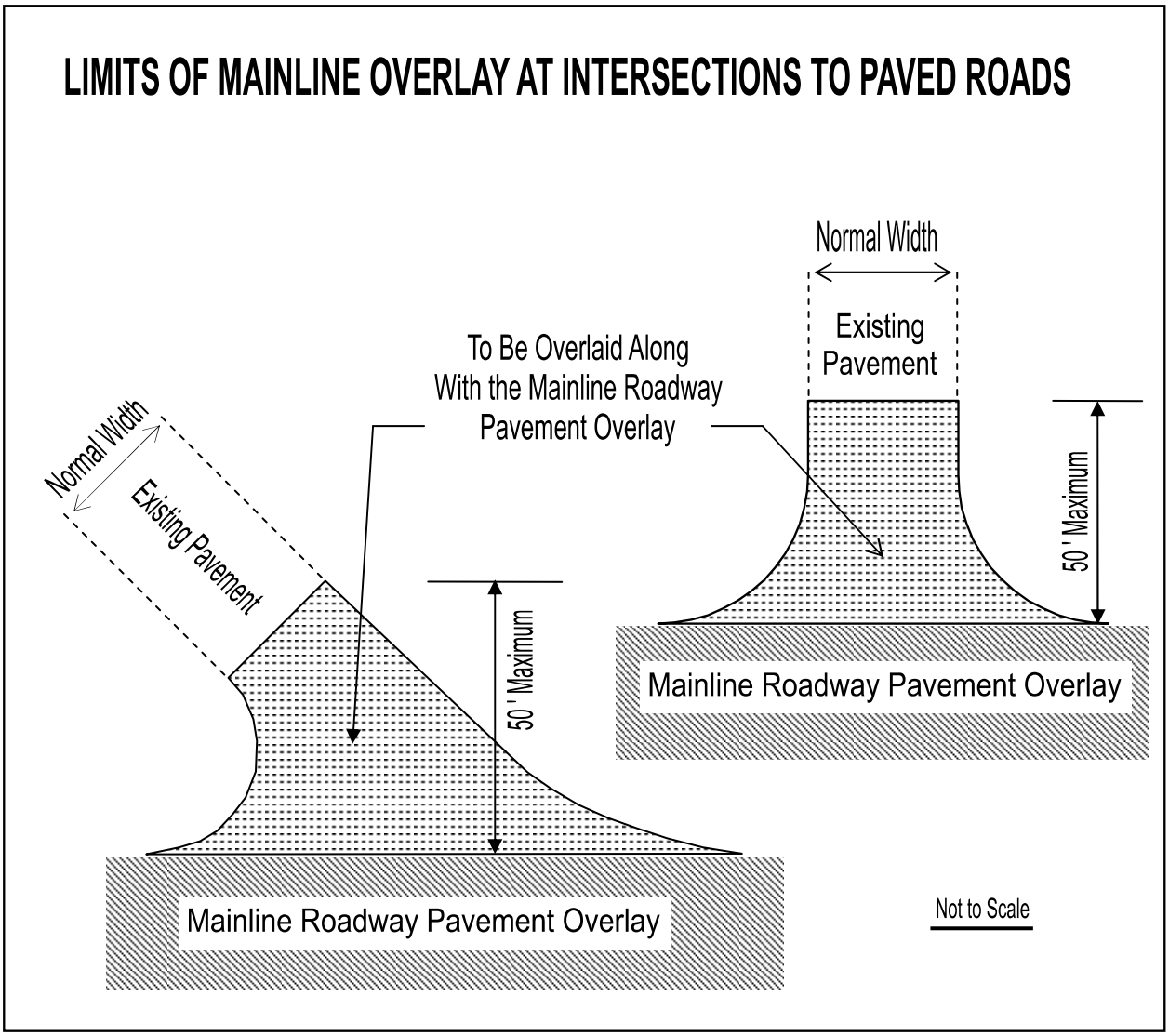
On curb and gutter sections where planing is required for the mainline roadway overlay, planing shall also be required on the intersecting paved road area prior to these areas being overlaid.

Asphalt concrete overlay pavement placed on existing paved roadway surfaces that intersects the mainline roadway pavement overlay shall be constructed using a method approved by the Engineer, which shall include the cutting of a notch into the pavement. The approved method shall provide a smooth transition between new pavement and existing pavement. Such tie-ins shall conform to the requirements of Section 315.05(c) of the Specifications except that all joints at tie-in locations shall be tested using a 10-foot straightedge in accordance with the requirements

of Section 315.07(a) of the Specifications. The variation from the testing edge of the straightedge between any two contact points with the pavement surface shall not exceed 1/4 inch.

V. MEASUREMENT AND PAYMENT

Overlay at intersections to paved roads will be measured and paid for in accordance with the pay items of Section 315 of the Specifications; and where Stone Matrix Asphalt (SMA) is specified in the Contract, Section 317 of the Specifications, and the Special Provision for Cold Planing (Milling) Asphalt Concrete Operations and Section 515 of the Specifications.



VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 200—GENERAL

SECTION 200—GENERAL of the Specifications is amended as follows:

200.06-Technician and Batcher Certification is replaced with the following:

Certification for technicians and batchers will be awarded by the Department upon a candidate's satisfactory completion of an examination.

(a) **Central Mix Aggregate Technician:** A Central Mix Aggregate Technician designs and makes necessary adjustments in job mixtures at the plant based on an analysis of the specified material. The technician also samples materials and conducts any tests necessary to put the plant into operation and produce a mixture in accordance with the applicable Specifications.

(b) **Asphalt Plant Level I Technician:** An Asphalt Plant Level I Technician samples materials.

(c) **Asphalt Plant Level II Technician:** An Asphalt Plant Level II Technician samples material and is capable of conducting any tests necessary to put the plant into operation.

(d) **Concrete Plant Technician:** A Concrete Plant Technician performs necessary adjustments in the proportioning of material used to produce the specified concrete mixtures

(e) **Concrete Batcher:** A Concrete Batcher performs the batching operation. The batcher implements adjustments only at the direction of a certified Concrete Plant Technician unless the batcher's certification authorizes otherwise.

(f) **Asphalt Field Level I Technician:** An Asphalt Field Level I Technician provides quality control of the placement operations of Asphalt Concrete.

(g) **Asphalt Field Level II Technician:** An Asphalt Field Level II Technician inspects asphalt concrete placement in accordance with applicable requirements.

(h) **Concrete Field Technician:** A Concrete Field Technician provides quality control of placement operations for hydraulic cement concrete in accordance with applicable requirements.

(i) **Asphalt Mix Design Technician:** An Asphalt Mix Design Technician is responsible for designing and adjusting mixes as needed, reviewing and approving all test results, having direct communication with the plant for making recommended adjustments and is capable of conducting any tests necessary to put the plant into operation.

(j) **Aggregate Properties Technician:** An Aggregate Properties Technician conducts all aggregate tests on aggregate used in asphalt concrete in accordance with applicable requirements

(k) **Slurry Surfacing Technician:** A Slurry Surfacing Technician inspects the placement of emulsified asphalt slurry seal and latex modified emulsion treatment (Micro-surfacing) in accordance with applicable requirements.

(l) **Surface Treatment Technician:** A Surface Treatment Technician inspects the placement of single seal and modified (blotted) seal coats in accordance with applicable requirements.

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 211—ASPHALT CONCRETE

SECTION 211—ASPHALT CONCRETE of the Specifications is amended as follows:

Section 211.01—Description is replaced with the following:

Asphalt concrete shall consist of a combination of mineral aggregate and asphalt material mixed mechanically in a plant specifically designed for such purpose.

An equivalent single-axle load (ESAL) will be established by the Engineer, and SUPERPAVE mix types may be specified as one of the types listed as follows:

Mix Type	Equivalent Single-Axle Load (ESAL) Range (millions)	Minimum Asphalt Performance Grade (PG)[2]	Aggregate Nominal Maximum Size[1]
SM-9.0A	0 to 3	64-16	3/8 in
SM-9.0D	3 to 10	70-16	3/8 in
SM-9.0E	Above 10	76-22	3/8 in
SM-9.5A	0 to 3	64-16	3/8 in
SM-9.5D	3 to 10	70-16	3/8 in
SM-9.5E	Above 10	76-22	3/8 in
SM-12.5A	0 to 3	64-16	1/2 in
SM-12.5D	3 to 10	70-16	1/2 in
SM-12.5E	Above 10	76-22	1/2 in
IM-19.0A	Less than 10	64-16	3/4 in
IM-19.0D	10 to 20	70-16	3/4 in
IM-19.0E	20 and above	76-22	3/4 in
BM-25.0A	All ranges	64-16	1 in
BM-25.0D	Above 10	70-16	1 in

[1]**Nominal Maximum Size** is defined as one sieve size larger than the first sieve to retain more than 10 percent aggregate.

[2]**Minimum Asphalt Performance Grade (PG)** is defined as the minimum binder performance grade for the job mixes as determined by AASHTO T170 or AASHTO M320.

Asphalt concrete shall conform to the requirements for the mix type designated.

At the Contractor's option, an approved Warm Mix Asphalt (WMA) additive or process may be used to produce the asphalt concrete (AC) mix type designated.

Section 211.02(h) **antistripping additive** is replaced with the following:

An antistripping additive shall be used in all asphalt mixes. It may be hydrated lime or an approved chemical additive from the Department's approved list found in the Materials Division's Manual of Instructions, or a combination of both. The approved chemical additive shall be added at a rate of not less than 0.30 percent by weight of the total asphalt content of the mixture.

The mixture shall produce a tensile strength ratio (TSR) not less than 0.80 for the design and production tests. The TSR shall be determined in accordance with AASHTO T283, including a

freeze-thaw cycle (4-inch specimens compacted with a Marshall Hammer or 3.5 by 6-inch specimens when compacted with a gyratory compactor); except that the 16-hour curing time requirement and the 72 to 96-hour storage period will be waived. Design tests shall use the same materials that are to be used in the production mix and shall be conducted in a laboratory approved by the Department.

When a chemical additive is used, it shall be added to the asphalt cement prior to introduction into the mix. Any chemical additive or particular concentration of chemical additive found to be harmful to the asphalt material or that changes the original asphalt binder performance grade (PG), shall not be used.

Section 211.02(j)1 is replaced with the following:

1. Asphalt surface, intermediate and base mixtures containing RAP should use the performance grade (PG) of asphalt cement as indicated in Table II-I4A, however, the choice of PG to use in the mix shall be the responsibility of the Contractor in order to meet the requirements of Section 211.01 of the Specifications.

Section 211.02—Materials is amended by adding the following:

(k) **Warm Mix Asphalt (WMA)** additives or processes shall be approved by the Department prior to use. Approved materials and processes shall be obtained from the Department's approved list which is included in the Materials Division's Manual of Instructions.

TABLE II-12A AGGREGATE PROPERTIES is amended to add **Mix Type IM-19.0E** as follows:

TABLE II-12A
Aggregate Properties

	Coarse Aggregate Properties				
	CAA		ASTM D4791		
Mix Type	1 fractured face	2 fractured faces	F & E "(5:1) % by weight	Fine Aggregate Properties SE	FAA
IM-19.0 E	95% min.	90% min.	10% max.[1]	45% min.	45% min.

TABLE II-13 ASPHALT CONCRETE MIXTURES: DESIGN RANGE is amended to add **Mix Type IM-19.0E** to IM-19.0 A,D as follows:

TABLE II-13
Asphalt Concrete Mixtures: Design Range[1]

	Percentage by Weight Passing Square Mesh Sieves										
Mix Type	2 in	1 1/2 in	1 in	3/4 in	1/2 in	3/8 in	No. 4	No. 8	No. 30	No. 50	No. 200
IM-19.0 A,D,**E**			100	90-100	90 max.	--	--	28-49			2-8

TABLE II-14 MIX DESIGN CRITERIA is replaced with the following:

TABLE II-14
Mix Design Criteria

Mix Type	VTM (%) Production (Note 1)	VFA (%) Design	VFA (%) Production (Note 2)	Min. VMA (%)	Fines/Asphalt Ratio (Note 3)	No. of Gyrations N Design
SM-9.0A Notes 1,2,3	2.0-5.0	75-80	70-85	16	0.6-1.3	65
SM-9.0D Notes 1,2,3	2.0-5.0	75-80	70-85	16	0.6-1.3	65
SM-9.0E Notes 1,2,3	2.0-5.0	75-80	70-85	16	0.6-1.3	65
SM-9.5A Notes 1,2,3	2.0-5.0	73-79	68-84	15	0.6-1.2	65
SM-9.5D Notes 1,2,3	2.0-5.0	73-79	68-84	15	0.6-1.2	65
SM-9.5E Notes 1,2,3	2.0-5.0	73-79	68-84	15	0.6-1.2	65
SM-12.5A Notes 1,2,3	2.0-5.0	70-78	65-83	14	0.6-1.2	65
SM-12.5D Notes 1,2,3	2.0-5.0	70-78	65-83	14	0.6-1.2	65
SM-12.5E Notes 1,2,3	2.0-5.0	70-78	65-83	14	0.6-1.2	65
IM-19.0A Notes 1,2,3	2.0-5.0	69-76	64-81	13	0.6-1.2	65
IM-19.0D Notes 1,2,3	2.0-5.0	69-76	64-81	13	0.6-1.2	65
IM-19.0E Notes 1,2,3	2.0-5.0	69-76	64-81	13	0.6-1.2	65
BM-25.0A Notes 2,3,4	1.0-4.0	67-87	67-92	12	0.6-1.3	65
BM-25.0D Notes 2,3,4	1.0-4.0	67-87	67-92	12	0.6-1.3	65

[1]SM = Surface Mixture; IM = Intermediate Mixture; BM = Base Mixture.
Note 1: Asphalt content should be selected at 4.0 % Air Voids,
Note 2: During production of an approved job mix, the VFA shall be controlled within these limits.
Note 3: Fines-asphalt ratio is based on effective asphalt content.
Note 4: Base mix shall be designed at 2.5% air voids. BM-25.0 A shall have a minimum asphalt content of 4.4% unless otherwise approved by the Engineer. BM-25.0D shall have a minimum asphalt content of 4.6% unless otherwise approved by the Engineer.

Section 211.03—Job-Mix Formula is amended by deleting the second paragraph of (a).

Section 211.03—Job-Mix Formula is amended to replace (c) with the following:

(c) Three trial blends for gradation shall be run at one asphalt content.

Section 211.03—Job-Mix Formula is amended to replace (d)8 with the following:

8. For surface mixes, permeability test data shall be submitted in accordance with VTM 120 using either single point verification or the regression method for each surface mix having a different gradation. If the average of the permeability results from the single point verification method exceeds 150 x 10^{-5} cm/sec, or if the regression method predicts a permeability exceeding 150 x 10^{-5} cm/sec at 7.5% voids, the Contractor shall redesign the mixture to produce a permeability number less than 150 x 10^{-5} cm/sec.

Section 211.03—Job-Mix Formula is amended to replace (f) with the following:

(f) A determination will be made that any asphalt concrete mixture being produced conforms to the job-mix formula approved by the Department. The Department and Contractor will test the mixture using samples removed from production. The following tests will be conducted to determine the properties listed:

Property	Test
Asphalt content	VTM-102, (VTM-36 when approved)
Gradation	AASHTO T-30
SUPERPAVE properties	AASHTO R35
Asphalt cement material	AASHTO T316 or T-201

For Warm Mix Asphalt (WMA), SUPERPAVE properties will be determined by the Department and Contractor based on the mix designation in Section 211.03(d)6 of the Specifications.

The Department will perform rut testing in accordance with the procedures detailed in VTM-110. If the results of the rut testing do not conform to the following requirements, the Engineer reserves the right to require adjustments to the job-mix formula:

Mix Designation	Maximum Rut Depth, mm
A	7.0
D	5.5
E, (S)	3.5

After calibration of the gyratory compactor is completed, adjustments to the job-mix formula may be required by the Engineer.

In the event the Department determines that the mixture being produced does not conform to the approved job-mix formula and volumetric properties specified in Table II-14 based on the Department's or Contractor's test results, the Contractor shall immediately make corrections to bring the mixture into conformance with the approved job-mix formula or cease paving with that mixture.

Subsequent paving operations using either a revised or other job-mix formula that has not been verified as described herein shall be limited to a test run of 100 to 300 tons of mixture if such material is to be placed in Department project work. No further paving for the Department using that specific mixture shall occur until the acceptability of the mixture being produced has been verified using the 100 to 300 ton constraint.

TABLE II-14A
Recommended Performance Grade of Asphalt Cement

Mix Type	Percentage of Reclaimed Asphalt Pavement (RAP) in Mix		
	%RAP ≤ 25.0%	25.0% < %RAP ≤ 30%	25.0% < %RAP ≤ 35%
SM-4.75A, SM-9.0A, SM-9.5A, SM-12.5A	PG 64-22	PG 64-22	
SM-4.75D, SM-9.0D, SM-9.5D, SM-12.5D	PG 70-22	PG 64-22	
IM-19.0A	PG 64-22	PG 64-22	
IM-19.0D	PG 70-22	PG 64-22	
BM-25.0A	PG 64-22		PG 64-22
BM-25.0D	PG 70-22		PG 64-22

Based on rut testing performed by the Department and/or field performance of the job mix, the Engineer reserves the right to require adjustments to the job-mix formula.

Section 211.04—Asphalt Concrete Mixtures is amended by replacing (b) with the following:

(b) **Types IM-19.0A, IM-19.0D, and IM-19.0E asphalt concrete** shall consist of crushed stone, crushed slag, or crushed gravel and fine aggregate, slag or stone screenings, or a combination thereof combined with asphalt cement.

NOTE: At the discretion of the Engineer, an intermediate mix may be designated as either SM-19.0A, SM-19.0D or SM-19.0E. When designated as such, no more than 5 percent of the aggregate retained on the No. 4 sieve may be polish susceptible. All material passing the No. 4 sieve may be polish susceptible.

Section 211.04—Asphalt Concrete Mixtures is amended to replace (e) with the following:

(e) **Type SM-9.5, SM-12.5, IM-19.0 and BM-25.0 asphalt concrete** may be designated E (polymer modified), or stabilized (S). Asphalt concrete mixtures with the E designation may not be stabilized.

1. **Type E asphalt mixtures** shall consist of mixes incorporating a neat asphalt material with polymer modification complying with the requirements of PG 76-22 and have a rolling thin film oven test residue elastic recovery at 77 degrees F of a minimum of 70 percent when tested in accordance with ASTM D 6084 procedure A. E designated mixtures shall not contain more than 15 percent reclaimed asphalt pavement (RAP) material.

2. **Type (S) asphalt mixtures** shall consist of mixes incorporating a stabilizing additive from the Department's approved list found in the Materials Division's Manual of Instructions. These mixes shall be designated with an (S) following the standard mix designation. The minimum required additive shall be as specified on the Department's approved list found in the Materials Division's Manual of Instructions.

3. **Type L asphalt mixtures** will be allowed to contain a 100 percent polishing coarse and fine aggregate. These mixes shall be designated with a L following the standard mix designation.

Section 211.05—Testing is amended to replace the second paragraph with the following:

The Contractor shall have a Department-certified Asphalt Mix Design Technician for designing and adjusting mixes as necessary. The Asphalt Mix Design Technician or Asphalt Plant Level II Technician may perform testing of asphalt mixes. The Asphalt Mix Design Technician shall be responsible for reviewing and approving the results of all testing. The Asphalt Mix Design Technician shall be available and have direct communication with the plant for making necessary adjustments in the asphalt concrete mixes at the mixing plant. The Asphalt Mix Design Technician and Asphalt Plant Level II Technician shall each be capable of conducting any tests necessary to put the plant into operation; however, the Asphalt Mix Design Technician shall be responsible for producing a mixture that complies with the requirements of these Specifications. The Department will award certification.

Section 211.05—Testing is amended to delete the last sentence of the last paragraph.

Section 211.06—Tests is replaced with the following:

The Department may sample materials entering into the composition of the asphalt concrete, the mixture, or the completed pavement. The Contractor shall cooperate with the Engineer in obtaining these samples. When samples are obtained from the pavement, the resulting voids shall be filled and refinished by the Contractor without additional compensation.

Abson recovery samples shall be PG graded according to the requirements of AASHTO M 320-05. Samples meeting the required grades specified in Section 211.01 of the Specifications shall be acceptable.

When the Department performs PG grading on the asphalt in a Contractor's liquid asphalt storage tank, the Engineer will notify the asphalt concrete producer and binder supplier if tests indicate that the binder properties of the asphalt material differ from those of the approved job-mix. The asphalt concrete producer and binder supplier shall determine corrective action with the approval of the Engineer.

Section 211.08—Acceptance is amended to replace the second paragraph with the following:

Acceptance for gradation and asphalt cement content will be based on the mean of results of eight tests performed on samples taken in a stratified random manner from each 4,000-ton lot (8,000-ton lots may be used when the normal daily production of the source from which the material is being obtained is in excess of 4,000 tons). Unless otherwise approved by the Engineer, samples shall be obtained from the approximate center of the truckload of material. Any statistically acceptable method of randomization may be used to determine when to take the stratified random sample; however, the Department shall be advised of the method to be used prior to the beginning of production.

Section 211.08—Acceptance is amended to replace the third sentence of the fourth paragraph with the following:

The maximum temperature as recommended by the supplier shall not be exceeded for a mix designated E or (S).

Table II-15 PROCESS TOLERANCE is replaced with the following:

TABLE II-15

Process Tolerance

Tolerance on Each Laboratory Sieve and Asphalt Content: Percent Plus and Minus												
No. Tests	**Top Size [1]**	**1 ½"**	**1"**	**¾"**	**½"**	**3/8"**	**No. 4**	**No. 8**	**No. 30**	**No. 50**	**No. 200**	**A.C.**
1	0.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	6.0	5.0	2.0	.60
2	0.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	4.3	3.6	1.4	0.43
3	0.0	4.4	4.4	4.4	4.4	4.4	4.4	4.4	3.3	2.8	1.1	0.33
4	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	2.5	1.0	0.30
5	0.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	2.7	2.2	0.9	0.27
6	0.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	2.4	2.0	0.8	0.24
7	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.3	1.9	0.8	0.23
8	0.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.1	1.8	0.7	0.21
12	0.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	1.7	1.4	0.6	0.17

[1]Defined as the sieve that has 100% passing as defined in Table II-13.

Section 211.09 is amended to replace the last three paragraphs with the following:

The unit bid price will be reduced by 0.5 percent for each adjustment point applied for standard deviation.

Section 211.10–Referee System is amended to replace (a) and (b) with the following:

(a) In the event the test results obtained from one of the eight samples taken to evaluate a particular lot appear to be questionable, the Contractor may request in writing that the results of the questionable sample be disregarded, whereupon the Contractor shall have either an AASHTO-accredited lab or Department lab perform tests on five additional samples taken from randomly selected locations in the roadway where the lot was placed.

In the event the Engineer determines that one of the 8 test results appears to be questionable, the Department will perform tests on five additional samples taken from the randomly selected locations in the roadway where the lot was placed. The test results of the seven original, i.e. unquestioned, samples will be averaged with the test results of the five road samples, and the mean of the test values obtained for the twelve samples will be compared to the requirements for the mean of twelve tests as specified in Table II-15.

(b) In the event the Contractor questions the mean of the eight original test results obtained for a particular lot, the Contractor may request in writing approval to have either an AASHTO-accredited lab or Department lab perform additional testing of that lot.

In the event the Engineer determines that the mean of the eight original test results are questionable, the Department will perform additional testing of that lot. The test results of the eight samples will be averaged with the test results of the four additional samples taken from randomly selected locations in the roadway where the lot was placed, and the mean of the test values obtained from the twelve samples will be compare to the requirements for the mean of twelve tests as specified in Table II-15.

If the Contractor requests additional tests, as described in (a) or (b) herein, the Contractor shall sample the material and have either an AASHTO-accredited lab or Department lab test the material in accordance with Department-approved procedures. The Engineer reserves the right to observe the sampling and testing.

In the event the mean of the test values obtained for the twelve samples conforms to the requirements for the mean of twelve tests, the material will be considered acceptable. In the event that the mean of the test values obtained for the twelve samples does not conform to the requirements for the mean result of twelve tests, the lot will be adjusted in accordance with the adjustment rate specified in Section 211.09 of the Specifications.

Samples of the size shown herein shall be saw cut by the Contractor for testing without the use of liquids:

Application Rate	Minimum Sample Size
125 lb/yd^2	8 by 8 in
150 lb/yd^2	7 by 7 in
200 lb/yd^2	6 by 6 in
300 lb/yd^2	5 by 5 in

Section 211.12 (a) **– Certification for Plant Operation and Sampling** is replaced with the following:

(a) **Certification for Plant Operation and Sampling**: A Certified Asphalt Plant Level I Technician or a Certified Asphalt Plant Level II Technician shall sample material at the plant.

Section 211.15—Initial Production is replaced with the following:

(a) **Warm Mix Asphalt (WMA):** At the start of production, the Contractor shall place no more than 500 tons or up to one day's production as directed by the Engineer at an approved site, which may be the project site, so the Engineer can examine the process control of the mixing plant, the Contractor's placement procedures, surface appearance of the mix, compaction patterns of the Contractor's roller(s), and correlation of the nuclear density device.

(b) **Hot Mix Asphalt (HMA):** At the start of production of a mix not previously used on a state roadway, the Contractor shall place 100 to 300 tons or up to one day's production as directed by the Engineer at an approved site, which may be the project site, so the Engineer can examine the process control of the mixing plant, the Contractor's placement procedures, surface appearance of the mix, compaction patterns of the Contractor's roller(s), and correlation of the nuclear density device.

The material shall be placed at the specified application rate and will be paid for at the contract unit price for the specified mix type. The Engineer will determine the disposition of material that was not successfully produced and/or placed due to negligence in planning, production, or placement by the Contractor.

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SUPPLEMENTAL SECTION 315—ASPHALT CONCRETE PLACEMENT

SECTION 315—ASPHALT CONCRETE PAVEMENT of the Specifications is amended as follows:

The Table of Contents for the 2007 Road and Bridge Specifications is revised to rename **SECTION 315—ASPHALT CONCRETE PAVEMENT** as **SECTION 315—ASPHALT CONCRETE PLACEMENT**.

Section 315.01—Description is replaced with the following:

This work shall consist of constructing one or more courses of asphalt concrete on a prepared foundation in accordance with the requirements of these specifications and within the specified tolerances for the lines, grades, thicknesses, and cross sections shown on the plans or as established by the Engineer. At the Contractor's option, the asphalt concrete mix may be produced using a warm-mix additive or process approved by the Department. When used, the temperature placement limitations for Warm Mix Asphalt (WMA) shall be applied.

Section 315.02(b) **Asphalt for tack coat and prime coat** is replaced with the following:

Asphalt for Tack Coat shall conform to the special provision titled "Nontracking Tack Coat." Asphalt for Prime Coat shall conform to the requirements in Section 310 of the Specifications. Asphalt for prime coat may be changed by one viscosity grade by the Engineer at no change in the contract unit price.

Section 315.02(d) **Liquid asphalt coating (emulsion) for rumble strip** is replaced with the following:

(d) **Liquid asphalt coating (emulsion) for rumble strip** shall conform to the requirements of Section 210 of the Specifications. For centerline rumble strips, CSS-1h or CQS-1h conforming to Section 210 of the Specifications shall be used. The CSS-1h or CQS-1h may be diluted by up to 30 percent at the emulsion manufacture's facility.

Section 315.03(a) **Hauling Equipment** is replaced with the following:

(a) **Hauling Equipment:** Trucks used for hauling asphalt mixtures shall have tight, clean, smooth metal or other non-absorptive/inert material bodies equipped with a positive locking metal tailgate. Surfaces in contact with asphalt mixtures shall be given a thin coat of aliphatic hydrocarbon invert emulsion release agent (nonpuddling), a lime solution, or other material on the Department's list of approved release agents. Except where a nonpuddling release agent is used, the beds of dump trucks shall be raised to remove excess agent prior to loading. Only a nonpuddling agent shall be used in truck beds that do not dump. Each truck shall be equipped with a tarpaulin or other cover that will protect the mixture from moisture and foreign matter and prevent the rapid loss of heat during transportation.

Section 315.03—Equipment is amended by adding the following:

(e) **Material Transfer Vehicle (MTV):** When required in the Contract, a MTV shall be a self-propelled storage unit capable of receiving material from trucks, storing the material and transferring the material from the unit to a paver hopper insert via a conveyor system. The required paver hopper insert and unit shall have a combined minimum storage

capacity of 15 tons. Prior to placing the asphalt material on the roadway surface, the storage unit or paver hopper insert must be able to remix the material in order to produce a uniform, non-segregated mix, having a uniform temperature.

Section 315.04—Placement Limitations is replaced with the following:

Asphalt concrete mixtures shall not be placed when weather or surface conditions are such that the material cannot be properly handled, finished, or compacted. The surface upon which asphalt mixtures are to be placed shall be free of standing water, dirt, and mud and the base temperature shall conform to the following:

(a) **Asphalt Concrete Produced with Warm Mix Asphalt Additives or Processes:**

1. **When the base temperature is 40 degrees F and above**, laydown will be permitted at any temperature below the maximum limits given in Section 211.08 of the Specifications.

2. **When the laydown temperature is between 301 degrees F and 325 degrees F**, the number of compaction rollers will be the same number as required for 300 degrees F or less.

(b) **Asphalt Concrete Produced without Warm Mix Asphalt Additives or Processes:**

1. **When the base temperature is above 80 degrees F,** mixture laydown will be permitted at any temperature conforming to the limits specified in Section 211 of the Specifications.

2. **When the base temperature is between 40 degrees F and 80 degrees F**, the Nomograph, Table III-2, shall be used to determine the minimum laydown temperature of the asphalt concrete mixes. At no time should the minimum base temperature for base (BM) and intermediate (IM) mixes be less than 40 degrees F. At no time should the minimum laydown temperature for base (BM) and intermediate (IM) mixes be less than 250 degrees F.

   For surface mixes (SM), at no time should the minimum base and laydown temperatures be less than the following:

PG Binder/Mix Designation	Percentage of Reclaimed Asphalt Pavement (RAP) Added to Mix	Minimum Base Temperature	Minimum Placement Temperature
PG 64-22 (A)	<=25%	40 °F	250 °F
PG 64-22 (A)	>25%	50 °F	270 °F
PG 70-22 (D)	<=30%	50 °F	270 °F
PG 76-22 (E)	<=15%	50 °F	290 °F
PG 64-22 (S)	<=30%	50 °F	290 °F

(3) **When the laydown temperature is between 301 degrees F and 325 degrees F,** the number of compaction rollers will be the same number as required for 300 degrees F.

Intermediate and base courses that are placed at rates of application that exceed the application rates shown in Table III-2 shall conform to the requirements for the maximum application rate shown for 8-minute and 15-minute compaction rolling as per number of rollers used.

Should the Contractor be unable to complete the compaction rolling within the applicable 8-minute or 15-minute period, the placing of asphalt mixture shall either cease until sufficient rollers are used or other corrective action is taken to complete the compaction rolling within the specified period.

Compaction rolling shall be completed prior to the mat cooling down to 175 degrees F. Finish rolling may be performed at a lower mat temperature.

The final asphalt pavement finish course shall not be placed until construction pavement markings are no longer required.

Section 315.05(b) **Conditioning Existing Surface** is replaced with the following:

(b) **Conditioning Existing Surface:** When the surface of the existing pavement or base is irregular, it shall be brought to a uniform grade and cross section as directed by the Engineer. The surface on which the asphalt concrete is to be applied shall be prepared in accordance with the requirements of the applicable specifications and shall be graded and compacted to the required profile and cross section.

When specified, prior to placement of asphalt concrete, longitudinal and transverse joints and cracks shall be sealed by the application of an approved crack sealing material per special provision titled "Sealing Cracks in Asphalt Concrete Surfaces or Hydraulic Cement Concrete Pavement".

Contact surfaces of curbing, gutters, manholes, and other structures projecting into or abutting the pavement and cold joints of asphalt shall be painted with a thick, uniform coating of asphalt prior to placement of asphalt mixture.

A tack or prime coat of asphalt will be required as specified below and shall conform to the applicable requirements of Section 311 of the Specifications or the special provision titled "Nontracking Tack Coat". Asphalt classed as cutbacks or emulsions shall be applied ahead of the paving operations, and the time interval between applying and placing the paving mixture shall be sufficient to ensure a tacky residue providing maximum adhesion of the paving mixture to the base. The mixture shall not be placed on tack or prime coats that have been damaged by traffic or contaminated by foreign material. Traffic shall be excluded from such sections.

1. **Priming and Tacking:**

a. **Priming aggregate base or subbase:** Unless otherwise specified in the contract documents, priming with asphalt material will not be required on aggregate subbase or base material prior to the placement of asphalt base, intermediate or surface layers.

b. **Tacking:** Application of tack at joints, adjacent to curbs, gutters, or other appurtenances, shall be applied with a hand wand or with spray bar at the rate of 0.2 gallon per square yard. At joints, the tack applied by the hand wand or a spray bar shall be 2 feet in width with 4 to 6 inches protruding beyond the joint for the first pass. Tack for the adjacent pass shall completely cover the vertical face of the mat edge, so that slight puddling of asphalt occurs at the joint, and extend a minimum of 1 foot into the lane to be paved.

Milled faces that are to remain in place shall be tacked in the same way for the adjacent pass. Use of tack at the vertical faces of longitudinal joints will not be required when paving in echelon.

On rich sections or those that have been repaired by the extensive use of asphalt patching mixtures, the tack coat shall be eliminated when directed by the Engineer.

Tack shall not be required atop asphalt stabilized open-graded material drainage layers.

Tack shall be applied between the existing asphalt surface and each asphalt course placed thereafter.

2. **Removing depressions and elevating curves:** Where irregularities in the existing surface will result in a course more than 3 inches in thickness after compaction, the surface shall be brought to a uniform profile by patching with asphalt concrete and thoroughly tamping or rolling until it conforms with the surrounding surface. The mixture used shall be the same as that specified for the course to be placed.

When the Contractor elects to conduct operations to eliminate depressions, elevate curves, and place the surface course simultaneously, he shall furnish such additional spreading and compacting equipment as required to maintain the proper interval between the operations.

Section 315.05(c) **Placing and Finishing** is amended to replace the second paragraph with the following:

A continuous line to mark the edge of pavement and provide proper control of pavement width and horizontal alignment will not be required for this contract.

And to add the following paragraphs:

Prior to application of tack coat and commencement of paving operations the Contractor shall clean the existing pavement surface of all accumulated dust, mud, or other debris that may affect the bond of the new overlay, as determined by the Engineer. The Contractor shall ensure the surface remains clean until commencement and during paving operations. The cost for cleaning and surface preparation shall be included in the bid price for asphalt concrete.

When required in the Contract, a MTV shall be used during the placement of designated asphalt mixes on full lane width applications.

Section 315.05(c) **Placing and Finishing** is amended to replace the fifth paragraph with the following:

The Contractor shall have a certified Asphalt Field Level II Technician present during all paving operations. Immediately after placement and screeding, the surface and edges of each layer shall be inspected by the Asphalt Field Level II Technician to ensure compliance with the asphalt placement requirements and straightedged to ensure uniformity and smoothness. The Asphalt Field Level II Technician and shall make necessary corrections, if necessary, prior to compaction. The finished pavement shall be uniform and smooth.

The **C**ontractor's Asphalt Field Level II Technician shall be present during all density testing.

Section 315.05(d) **Compacting** is amended by replacing the fifth paragraph with the following:

Rolling shall begin at the sides and proceed longitudinally parallel with the center of the pavement, each trip overlapping at least 6 inches, gradually progressing to the crown of the pavement. When abutting a previously placed lane, rolling shall begin at the outside unconfined

side and proceed toward the previously placed lane. On superelevated curves, rolling shall begin at the low side and proceed to the high side by overlapping of longitudinal trips parallel with the centerline.

Section 315.05(e) is replaced with the following:

(e) **Density:** Density shall be determined in accordance with the following:

1. The Contractor shall perform roller pattern and control strip density testing on surface, intermediate, and base courses in accordance with the requirements of VTM-76. The Contractor shall have a certified Asphalt Field Technician perform all density testing.

   Density shall be determined with a thin-lift nuclear gauge conforming to the requirements of VTM-81 or from the testing of plugs/cores taken from the roadway where the mixture was placed. Density test locations shall be marked and labeled in accordance with the requirements of VTM-76. When acceptance testing is performed with a nuclear gauge, the Contractor shall have had the gauge calibrated within the previous 12 months by approved calibration service. In addition, the Contractor shall maintain documentation of such calibration service for the 12-month period from the date of the calibration service. The required density of the compacted course shall not be less than 98.0 percent and not more than 102.0 percent of the target control strip density.

   Nuclear density roller pattern and control strip density testing shall be performed on asphalt concrete overlays placed directly on surface treatment roadways and when overlays are placed at an application rate less than 125 pounds per square yard, based on 110 pounds per square yard per inch, on any surface. In these situations, sawed plugs or core samples will not be required and the minimum control strip densities as specified in Table III-3 will be waived. The required density of the compacted course shall be not less than 98.0 percent and not more than 102.0 percent of the target control strip.

TABLE III-3
Density Requirements

Mixture Type	Min. Control Strip Density (%)[1]
SM-9.5A, 12.5A	92.5
SM-9.5D, 12.5D	92.2
SM-9.5E, 12.5E	92.2
IM-19.0A, IM-19.0D, IM-19.0E	92.2
BM-25.0A, BM-25.0D	92.2

[1]The control strip density requirement is the percentage of theoretical maximum density of the job-mix formula by SUPERPAVE mix design or as established by the Engineer based on two or more production maximum theoretical density tests.

The project will be divided into "control strips" and "test sections" by the Engineer for the purpose of defining areas represented by each series of tests.

a. Control Strip: Control strips shall be constructed in accordance with the requirements of these specifications and VTM-76.

   The term *control strip density* is defined as the average of 10 determinations selected at stratified random locations within the control strip.

One control strip shall be constructed at the beginning of work on each roadway and shoulder course and on each lift of each course. An additional control strip shall be constructed when a change is made in the type or source of materials; whenever a significant change occurs in the composition of the material being placed from the same source; or when there is a failing test strip. During the evaluation of the initial control strip, paving operations may continue. However, paving and production shall be discontinued during construction and evaluation of additional control strips. In the event that two consecutive control strips fail, subsequent paving operations shall cease until corrective action(s) has been taken with the approval of the Engineer. If it is determined with the Engineer's approval that the density cannot be obtained because of the condition of the existing pavement structure, the target control strip density shall be determined from the roller pattern that achieves the optimum density and shall be used on the remainder of the roadway that exhibits similar pavement conditions.

Either the Engineer or Contractor may initiate an additional control strip at any time.

The length of the control strip shall be approximately 300 feet and the width shall not be less than 6 feet. On the first day of construction or beginning of a new course, the control strip shall be started between 500 and 1,000 feet from the beginning of the paving operation. The control strip shall be constructed using the same paving, rolling equipment, procedures, and thickness as shall be used on the remainder of the course being placed.

One reading shall be taken at each of 10 stratified random locations. No determination shall be made within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes. The average of these 10 determinations shall be the control strip density recorded to the nearest 0.1 pound per cubic foot. The minimum control strip density shall be determined in accordance with the requirements of VTM-76.

The control strip shall be considered a lot. If the control strip density conforms to the requirements specified in Table III-3, the control strip will be acceptable and the control strip density shall become the target control strip density. If the density does not conform to the requirements specified in Table III-3, the tonnage placed in the control strip and any subsequent paving prior to construction of another control strip will be paid for in accordance with Table III-4 on the basis of the percentage of the Table III-3 value achieved. The Contractor shall take corrective action(s) to comply with the density requirement specified in Table III-3.

TABLE III-4
Payment Schedule for Lot Densities

% of Target Control Strip Density	% of Payment
Greater than 102.0	95
98.0 to 102.0	100
97.0 to less than 98.0	95
96.0 to less than 97.0	90
Less than 96.0	75

b. **Test section (lot):** For the purposes of acceptance, each day's production shall be considered a lot unless the paving length is less than 3,000 linear feet or greater than 7,500 linear feet. When paving is less than 3,000 feet, it shall be combined with the previous day's production or added to the next day's production to create a lot as described below.

The standard size of a lot shall be 5,000 linear feet, with 1,000 foot sublots, of any pass 6 feet or greater made by the paving train for the thickness of the course. Upon approval by the Engineer, the lot size may be increased to 7,500 linear foot lots with 1,500 foot sublots when the normal daily production is in excess of 7,000 feet. Pavers traveling in echelon will be considered as two passes. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot size shall be redefined as follows:

- If the partial lot contains one or two sublots, the sublots will be added to the previous lot.

- If the partial lot contains three or four sublots, the partial lot will be redefined to be an entire lot.

Each lot shall be tested for density by taking a nuclear density reading from two random test sites selected by the Engineer within each sublot or a single test site when sawn cores are used for acceptance. Test sites shall not be located within 12 inches of the edge of any application width for surface and intermediate mixes or within 18 inches of the edge of any application width for base mixes.

The average of the sublot density measurements will be compared to the target nuclear density, or for cores the target percent of theoretical maximum density achieved, established on the control strip to determine the acceptability of the lot. Once the average density of the lot has been determined, the Contractor will not be permitted to provide additional compaction to raise the average. If two consecutive sublots produce density results less than 98 percent or more than 102 percent of the target control strip density, the Contractor shall immediately notify the Engineer and institute corrective action. At each test site in the sublot, the Longitudinal Joints shall also be tested for density using a nuclear density gauge. For surface and intermediate mixes, the gauge shall be placed within 4 inches of the joint. For base mixes, the gauge shall be placed within 6 inches of the joint. The gauge shall not be placed over top of the joint. The joint density value shall be recorded. If a single longitudinal joint density reading is less than 95 percent of the target control strip density, the Contractor shall institute corrective action. The values obtained from the joint readings will not be used in payment calculation. By the end of the day's operations, the Contractor shall furnish the test data developed during the day's paving to the Engineer.

When sawn cores are used for density acceptance: The Contractor shall perform acceptance testing for density for each sublot by obtaining one sawed 4 inch by 4 inch specimen, or one 4-inch-diameter cores, at a single random test site specified by the Engineer.

- The sub-lot site shall be marked as described in VTM-76.

- The bulk specific gravity of the cores shall be determined in accordance with VTM-6.

- The density of the cores shall be determined in accordance with the requirements of VTM-22.

Cores or plugs shall be bulked in the presence of the Department. The Department reserves the right to have the cores or plugs bulked on the project site. Sublot test sites shall be numbered sequentially per lot, marked on the pavement, filled with the paving mixture, and compacted prior to completion of each day of production.

The tonnage of each lot will be based on the lot's width and length and the mixture application rate as designated in the Contract or as revised by the Engineer. Payment will be made in accordance with the requirements of Table III-4.

The Engineer at any time on any project may perform lot density verification testing. Lot density verification is performed by testing plugs. The Contractor shall be responsible for taking plugs for testing. Testing of the plugs will be done by the Engineer.

Surface, Intermediate, and Base mixes:

Two plugs shall be taken by the Contractor per Verification, Sampling and Testing (VST) lot at locations identified by the Engineer. If the density of the plugs does not conform to the requirements for the lot in question or the same payment percentage determined by the Contractor's testing for that lot, then the Contractor may request the referee procedure to be invoked. One additional plug from the remaining sublots will be taken. Payment for that lot, based on the results of the initial two plugs/cores or referee procedure, will be in accordance with the specifications in Table III-4 on the basis of the percentage of the control strip bulk density achieved.

2. **Surface, intermediate, and base courses** not having a sufficient quantity of material to run a roller pattern and control strip shall be compacted to a minimum density of 91.5 percent of the theoretical maximum density as determined in accordance with the requirements of VTM-22. The Contractor shall be responsible for cutting cores or sawing plugs for testing by the Department. One set of plugs/cores shall be obtained within the first 20 tons of small quantity paving and every 100 tons thereafter for testing by the Contractor or the Department. Core/plug locations shall be randomly selected. If the density is less than 91.5 percent, payment will be made in accordance with the requirements of Table III-5.

TABLE III-5

Payment Schedule for Surface, Intermediate and Base Courses (Not sufficient quantity to perform density roller pattern and control strip)

% TMD	% of Payment
Greater than 91.5	100
90.2-91.4	95
88.3-90.1	90

Less than 88.2	75

Any section in which a mixture (e.g., SM-9.0) is being placed at an application rate of less than 125 pounds per square yard, based on 110 pounds per square yard per inch, that does not have a sufficient quantity of material for a roller pattern and control strip shall be compacted by rolling a minimum of three passes with a minimum 8-ton roller. No density testing will be required.

For asphalt patching, the minimum density of 91.5 percent of the maximum theoretical density will be determined in accordance with the requirements of VTM-22. The Contractor is responsible for cutting cores or sawing plugs. One set of plugs/cores shall be obtained within the first 20 tons of patching material and every 500 tons thereafter for testing by the Contractor or the Department. Core/plug locations shall be randomly selected. If the density is less than the 91.5 percent, payment will be made on the tonnage within the 20 or 500 ton lot in accordance with the requirements of Table III-5 of the Specifications.

Section 315.05(g) **Rumble Strips** is amended to replace fourth paragraph with the following:

Following the cutting and cleaning of the depressions of waste material, the entire rumble strip area shall be coated with liquid asphalt coating (emulsion) using a pressure distributor. For rumble strips installed on the shoulder, the approximate application rate shall be 0.1 gallons per square yard. For rumble strips installed in a new asphalt concrete surface (new construction or overlay) along the centerline, no sealing of the rumble strip area shall be performed. When the rumble strip is installed along the centerline in an existing asphalt concrete surface (i.e. more than one year since placement), the approximate application rate shall be 0.05 gallons per square yard. The application temperature shall be between 160 degrees F and 180 degrees F. For shoulder rumble strips only, overspray shall not extend more than 2 inches beyond the width of the cut depressions and/or shall not come in contact with pavement markings.

Section 315.07(c) **Thickness Tolerance** is replaced with the following:

(c) **Thickness Tolerance:** The thickness of the base course will be determined by the measurement of cores as described in VTM-32.

Acceptance of asphalt concrete base course for depth will be based on the mean result of measurements of samples taken from each lot of material placed. A *lot* of material is defined as the quantity being tested for acceptance except that the maximum lot size will be 1 mile of 24-foot-width base course.

A lot will be considered acceptable for depth if the mean result of the tests is within the following tolerance of the plan depth for the number of tests taken:

Plan Depth	1 test	2 tests	3 tests	4 tests
≤ 4"	0.6"	0.5"	0.4"	0.3"
>4." ≤8"	0.9"	0.7"	0.5"	0.4"
>8"≤12"	1"	0.9"	0.7"	0.5"
>12"	1.2"	1"	0.8"	0.6"

If an individual depth test exceeds the one test tolerance for the specified plan depth, that portion of the lot represented by the test will be excluded from the lot. If an individual test result indicates that the depth of material represented by the test is more than the tolerance for one test, the Contractor will not be paid for that material in excess of the tolerance throughout the length and width represented by the test. If an individual test

result indicates that the depth of the material represented by the test is deficient by more than the one test tolerance for the plan depth, correction of the base course represented by the test shall be made as specified hereinafter.

If the mean depth, based on two or more tests, of a lot of material is excessive (more than the plan depth), the Contractor will not be paid for that material in excess of the tolerance throughout the length and width represented by the tests.

If the mean depth, based on two or more tests, of a lot of material is deficient (less than the plan depth) by more than the allowable tolerance, the Contractor will be paid for the quantity of material that has been placed in the lot. Any required corrective action will be determined by the Engineer.

For excessive depth base courses, the rate of deduction from the tonnage allowed for payment as base course will be calculated at a weight of 115 pounds per square yard per inch of depth in excess of the tolerance. For sections of base course that are deficient in depth by more than the one test tolerance and less than two and half times the one test tolerance, the Contractor shall furnish and place material specified for the subsequent course to bring the base course depth within the tolerance. This material will be measured on the basis of tonnage actually placed, determined from weigh tickets, and paid for at the contract unit price for the base course material. Such material shall be placed in a separate course. If the deficiency is more than two and half times the one test tolerance, the Contractor shall furnish and place base course material to bring the base course thickness within the tolerance. Corrections for deficient base course depth shall be made in a manner to provide a finished pavement that is smooth and uniform. Sections requiring significant grade adjustments which have been previously identified and documented by the Engineer as being outside of the control of the Contractor will be exempt from deduction or corrective action.

When the Contract provides for the construction or reconstruction of the entire pavement structure, the surface and intermediate courses shall be placed at the rate of application shown on the plans within an allowable tolerance of ±5 percent of the specified application rate for application rates of 100 pounds per square yard or greater and within 5 pounds per square yard for application rates of less than 100 pounds per square yard. The amount of material exceeding the allowable tolerance will be deducted from the pay quantities.

When the Contract provides for the placement of surface or intermediate courses over existing pavement, over pavements constructed between combination curb and gutter, or in the construction or reconstruction of shoulders, such courses shall be placed at the approximate rate of application shown on the plans. However, the specified rate of application shall be altered where necessary to produce the required riding quality.

Section 315.08—Measurement and Payment is amended to include the following:

Material Transfer Vehicle (MTV), when required in the Contract, will not be measured for separate payment. The cost for furnishing and operating the MTV shall be included in the price bid for other appropriate items.

Warm Mix Asphalt (WMA) additive or process will not be measured for separate payment, the cost of which, shall be included in the price bid for other appropriate items.

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SUPPLEMENTAL SECTION 248—STONE MATRIX ASPHALT CONCRETE

SECTION 248—STONE MATRIX ASPHALT CONCRETE of the Specifications is amended as follows:

Section 248.02(a)**—Coarse Aggregate** is replaced with the following:

(a) **Coarse Aggregate:** Coarse aggregate shall conform to the following requirements when tested in accordance with the specified tests:

1. Los Angeles Abrasion	AASHTO T96	40% max.
a. Exception for Northern Va. District – Prince William County Only	AASHTO T96	30% max.
2. Flat and Elongated Particles: Measured on No. 4 retained,	VTM-121	
3 to 1		20% max.
5 to 1		5% max.
3. Magnesium Sulfate Soundness Loss, 5 cycles	AASHTO T104	15% max.
4. Particles retained on No. 4 sieve shall have at least	ASTM D5821	
1 fractured face		100% min.
2 fractured faces		90% min.
5. Absorption	AASHTO T 85	2% max.

Except for the determination of flat and elongated particles (Section 248.02(a)2 of the Specifications), the aggregate properties specified are for each stockpile of coarse aggregate material designated on the job mix form (Form No. TL-127). The material contained in each stockpile shall meet the minimum or maximum criteria specified.

For flat and elongated particles, these values are based on the mathematical blend of the coarse aggregate material designated on the job mix form (TL-127). During production, these values are based on the SMA material sampled during the acceptance process (QC testing).

SMA must contain two or more coarse aggregate sizes. At least two of the aggregate sizes must comprise a minimum of 10% of the total mix composition each. At least one cold feed bin shall be used for each aggregate size.

The use of slag will not be permitted.

At the discretion of the Engineer, mixes containing Reclaimed Asphalt Pavement (RAP) may be tested by VDOT for aggregate breakdown during lab compaction in accordance with VTM-99. If the percent of the total mix passing the No. 4 sieve increases by more than 10 percent after being compacted to N_{design} then the RAP component shall be changed or the authorization to use the mix will be discontinued.

Section 248.02(b)**—Fine Aggregate** is replaced by the following:

(b) **Fine Aggregate:** Virgin fine aggregates shall consist of a blend of 100 percent crushed aggregate. If RAP is being used as a component in SMA then the portion of the final SMA blend passing the No. 8 sieve shall have a minimum Fine Aggregate Angularity value of 45 percent as determined in accordance with AASHTO T 304 (Method A). The

magnesium sulfate soundness loss in 5 cycles shall not exceed 20 percent. In addition, the liquid limit shall not exceed 25 as determined in accordance with AASHTO T89.

Section 248.02(c) **Asphalt Binder** is amended to replace the first paragraph with the following:

Asphalt Binder: Asphalt binders shall be performance graded binder PG 70-22 or polymer modified binder PG 76-22 conforming to the requirements of the mix designation (E) so designated by the Department. The supplier shall certify to the Department that the binder complies with the requirements for all properties of the grade as specified in AASHTO M320 Table 1 for performance-graded asphalt binder. This certification shall be based on testing performed on samples of binder provided to the Contractor for incorporation into the mixture. Certification based on testing performed on laboratory-produced binders will not be acceptable.

Section 248.02(f)**—RAP** is replaced with the following:

(f) **RAP:** Reclaimed Asphalt Pavement (RAP) material may be used as a component material of SMA mixtures in conformance with the following:

1. SMA surface and intermediate mixtures containing RAP shall use the PG grade of asphalt cement designated by the mix specified on the plans or in the proposal e.g. an SMA-12.5 (76-22).

2. The final asphalt mixture shall conform to the requirements for the type specified.

3. During the production process, RAP material shall not be allowed to contact open flame.

4. RAP material shall be handled, hauled and stored in a manner that will minimize contamination. Further, the material shall be stockpiled and used in such manner that variable asphalt contents and asphalt penetration values will not adversely affect the consistency of the mixture.

Section 248.03—Composition of SMA Mixture is amended by adding the following:

Allowable RAP Percentages:

TABLE I-C Specified Performance Grade of Asphalt and Use of RAP	
Mix Type & PG	**Allowable RAP Percentage in Mix**
SMA-9.5 (70-22), SMA-12.5 (70-22) & SMA-19.0(70-22)	0.0 to 20.0
SMA-9.5 (76-22), SMA-12.5 (76-22) & SMA-19.0 (76-22)	0.0 to 15.0

TABLE II-24 SMA DESIGN RANGE is amended to replace **Surface Mix Types SMA 9.5** and **SMA 12.5** as follows:

TABLE II-24
SMA DESIGN RANGE

Percentage by Weight Passing Square Mesh Sieves (in)

Type No. (See Note)	1	¾	1/2	3/8	No. 4	No. 8	No. 30	No. 200
Surface Mixes								
SMA 9.5	-	100	90-100	65-75	25-32	15-25	-	9-11
SMA 12.5	-	100	83-93	80 max	22-28	16-24	15-20	9-11

Section 248.04 "PROCESS TOLERANCE" Table is replaced with the following:

Process Tolerance

Tolerance on Each Laboratory Sieve and Asphalt Content: Percent Plus and Minus									
No. Tests	**Top Size**	**¾"**	**½"**	**3/8"**	**No. 4**	**No. 8**	**No. 30**	**No. 200**	**A.C.**
1	0.0	8.0	8.0	8.0	6.0	6.0	6.0	4.0	0.60
2	0.0	5.7	5.7	5.7	4.3	4.3	4.3	2.8	0.43
3	0.0	4.4	4.4	4.4	3.3	3.3	3.3	2.2	0.33
4	0.0	4.0	4.0	4.0	3.0	3.0	3.0	2.0	0.30
5	0.0	3.6	3.6	3.6	2.7	2.7	2.7	1.8	0.27
6	0.0	3.3	3.3	3.3	2.4	2.4	2.4	1.6	0.24
7	0.0	3.0	3.0	3.0	2.3	2.3	2.3	1.5	0.23
8	0.0	2.8	2.8	2.8	2.1	2.1	2.1	1.4	0.21
12	0.0	2.3	2.3	2.3	1.7	1.7	1.7	1.2	0.17

Section 248.04 is amended to replace the third paragraph with the following

The Contractor shall check and report the percentage of flat and elongated particles (F&E) in the coarse aggregates of the mix design during production. When the SMA material is sampled for acceptance (gradation and AC content), two of the eight sub-lots must be selected for F&E verification in the first lot. The F&E testing will be performed on the coarse aggregate material retained on the #4 sieve, in accordance with the requirements of VTM-121, after the gradation is performed. If passing results are obtained on each sample in the first lot, then F&E testing shall be performed on a frequency of every second lot of material produced (i.e., Lots 3, 5, 7, etc.) by randomly selecting two random sub-lots. If the F&E of the mix exceeds the specified limits, the Contractor shall stop production and notify the Engineer. Production shall not resume until the Contractor has taken corrective action and the Engineer has approved the corrective action. Once production has resumed, the Contractor shall determine the F&E of the mix for two consecutive lots by randomly selecting two sub-lots per lot. If passing results are obtained for these two lots, then the F&E testing frequency shall return to every second lot of material produced.

Section 248.05(d)**—Mixing Temperature** is replaced with the following:

(d) **Mixing Temperature:** The recommended plant mixing temperatures for PG 70-22 should be 315 to 340 degrees F and at no time shall the temperature exceed 350 degrees F. For PG 76-22, the plant mixing temperatures shall be within the limits of the asphalt supplier's recommendations.

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 317—STONE MATRIX ASPHALT CONCRETE PLACEMENT

SECTION 317—STONE MATRIX ASPHALT CONCRETE PAVEMENT of the Specifications is amended as follows:

The Table of Contents for the 2007 Road and Bridge Specifications is revised to rename **SECTION 317—STONE MATRIX ASPHALT CONCRETE PAVEMENT** as **SECTION 317—STONE MATRIX ASPHALT CONCRETE PLACEMENT**.

Section 317.01—Description is replaced with the following:

This specification covers the furnishing, installation, and acceptance criteria for stone matrix asphalt (SMA) concrete pavement. SMA shall be in accordance with these specifications and Section 315 of the Specifications.

Section 317.06—Weather Restrictions is replaced with the following:

SMA mixture shall be placed only when the ambient and surface temperatures are 50 degrees F or above, unless a warm mix additive or process approved by the Department is used to produce the SMA at which the surface temperature must be 40 degrees F or above.

Section 317.07—Placing and Finishing is amended to replace the first paragraph with the following:

For mixtures containing PG 70-22, the mixture temperature shall not be less than 300 degrees F in the truck and less than 290 degrees F immediately behind the screed.

For mixtures containing PG 76-22, the mixture temperature in the truck and immediately behind the screed shall not be less than the minimum compaction temperature provided by the liquid asphalt supplier.

When a warm mix asphalt additive or process is used to produce the SMA, then no minimum mixture or compaction temperatures are specified.

Section 317.08—Compaction is amended to replace the fifth paragraph with the following:

For the purposes of acceptance, each day's production shall be considered a lot unless the paving length is less than 3,000 linear feet or greater than 7,500 linear feet. When paving is less than 3,000 feet, it shall be combined with the previous day's production or added to the next day's production to create a lot as described below.

The standard size of a lot shall be 5,000 linear feet, with 1,000 foot sublots, of any pass 6 feet or greater made by the paving train for the thickness of the course. Upon approval by the Engineer, the lot size may be increased to 7,500 linear foot lots with 1,500 foot sublots when the normal daily production is in excess of 7,000 feet. Pavers traveling in echelon will be considered as two passes. When a partial lot occurs at the end of a day's production or upon completion of the project, the lot size shall be redefined as follows:

- If the partial lot contains one or two sublots, the sublots will be added to the previous lot.
- If the partial lot contains three or four sublots, the partial lot will be redefined to be an entire lot.

The Contractor shall perform acceptance testing for density for each sublot by obtaining one sawed 4 inch by 4 inch specimen, or one 4-inch-diameter cores, at a single random test site specified by the Engineer. Test sites shall not be located within 12 inches of the edge of any application width for surface and intermediate mixes.

- The sub-lot site shall be marked as described in VTM-76.
- The bulk specific gravity of the cores shall be determined in accordance with VTM-6.
- The density of the cores shall be determined in accordance with the requirements of VTM-22.

Cores or plugs shall be bulked in the presence of the Department. The Department reserves the right to have the cores or plugs bulked on the project site. Sublot test sites shall be numbered sequentially per lot, marked on the pavement, filled with the paving mixture, and compacted prior to completion of each day of production. The payment for Lot density will be in accordance with the following:

Payment Schedule

% Density Achieved	% of Payment
More than 98.0	97
94.0 to 98.0	100
92.0 to 93.9	85
90.0 to 91.9	65
Less than 90.0	Remove and replace

Section 317.09 – Trial Section is replaced with the following:

At the start of production of a mix not placed the previous year on a state roadway the Engineer will require the Contractor to construct a trial section(s) for evaluation at least 1 week prior to, but not more than 30 days prior to, the start of roadway construction. The trial section shall be a maximum of 300 tons, and be constructed at a site approved by the Engineer or designated in the contract. The trial section will be used to examine the mixing plant process control, mixture draindown characteristics, placement procedures, SMA surface appearance, and compaction patterns and to calibrate the nuclear density device. In addition, the percentage of flat and elongated particles will be calculated on the SMA material produced for the trial section in accordance with the requirements of VTM-121 and compared to the maximum limits specified in the Coarse Aggregate Table in Section 248.02(a). A passing flat and elongated sample is required for acceptance of the trial section.

The material for the trial section will be paid for at the contract unit price for the mix type. Up to one additional trial section of the mix type specified will be paid for at the contract unit price. During the trial section(s), the Department will randomly select 3 plugs or cores locations to determine the in-place density in accordance with VTM-22. Payment for density will be in accordance with the Payment Schedule listed in Sec. 317.08. No more than two trial sections will be paid by the Department; any additional trial sections will be provided solely at the Contractor's expense at an off-site location.

Failing trial sections shall be removed and replaced based on the following criteria. A trial section shall be deemed to have failed if the VTM is less than 1.0 percent or exceeds 5.0 percent; if the VCA of the mix exceeds the VCA of the dry rodded condition; if the field density is less than 90.0 percent of the maximum theoretical density; or if excessive flushing/bleeding occurs in the wheel paths. Payment for the trial section shall be paid for as described in the previous paragraph. The

cost for removing the trial section shall be borne by the Contractor. Payment for replacement of the trial section shall be in accordance with the previous paragraph.

Section 317.10—Prepaving Conference is replaced with the following:

For those contractors who have never produced or placed SMA, the Department will hold a prepaving conference with the Contractor prior to the start of production.

Section 317.11—Measurement and Payment is amended to replace the second paragraph with the following:

The initial trial section will be paid for at the contract unit price for the mix type specified. Up to one additional trial section of the mix type specified will be paid for at the contract unit price. If additional trial sections are needed, the Department and the Contractor shall negotiate the price based upon a reduced percentage of the contract unit price. No more than four trial sections will be paid by the Department; any additional test sections will be provided solely at the Contractor's expense.

S211JG3-1211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
RECLAIMED ASPHALT SHINGLES (RAS) TEAR-OFFS IN ASPHALT CONCRETE

November 8, 2011

I. DESCRIPTION

This specification covers reclaimed asphalt shingles (RAS) tear-offs used in asphalt concrete (AC). These requirements are to be met in addition to those contained in Section 211 of the Specifications.

II. MATERIALS

(a) **Tear-off RAS materials** shall be discarded shingle scrap from the re-roofing of domestic buildings. These tear-offs shall have been produced by the manufacturing process for roofing shingles.

Tear-off RAS materials shall contain less than 3.0 percent of foreign materials such as paper, roofing nails, wood, or metal flashing. Materials shall be shredded prior to being incorporated in the AC mixture so that at least 99 percent of the shredded pieces passes the 1/2 inch(12. 5 mm) sieve and at least 80 percent passes the #4 (4.75mm) sieve.

Tear-off RAS materials shall not have asbestos containing material (ACM) as defined by the National Emission Standards for Hazardous Air Pollutants (NESHAP), which is less than 1 percent asbestos. The Contractor shall furnish a certification obtained from the recycler that Polarized Light Microscopy (PLM) tests were performed on random samples of RAS at the rate of 1 test per 100 tons or if operating under a Virginia DEQ permit the rate will be 1 test per 750 tons. The test results shall reveal no detectable level of ACM. Copies of the test results from the recycler shall be available upon request.

(b) **Asphalt Binder of the asphalt concrete mixture shall be** Performance Grade (PG) of asphalt conforming to the requirements specified in Section 211of the Specifications.

III. DETAIL REQUIREMENTS

RAS tear-offs in asphalt concrete shall be mixed mechanically in a plant specifically designed for asphalt concrete production.

IV. JOB-MIX FORMULA

The Contractor shall submit a job mix formula in accordance to section 211.03 of the Specifications. The Contractor shall submit material samples to include the RAS stockpiled tear-off shingles, reclaimed asphalt pavement (RAP) and PG Binder.

The amount of RAS material used in the recycled mixture shall be no more than five percent of the total mixture weight. The combined percentages of RAS and RAP shall not contribute more than 30 percent of the total asphalt content of the mixture, according to the following equation:

$$\frac{\left(\%RAS_{mix} \times \%AC_{RAS}/100\right) + \left(\%RAP_{mix} \times \%AC_{RAP}/100\right)}{\%AC_{JMF}} \leq 30.0\%$$

Where:

% RAS_{mix} =	Percent RAS in the Job Mix Formula
% AC_{RAS} =	Average Percent AC in the RAS
% RAP_{mix} =	Percent RAP in the Job Mix Formula
% AC_{RAP} =	Average Percent AC in the RAP
% AC_{JMF} =	Design AC content of the JMF

The Contractor shall determine the asphalt content of the RAS using AASHTO T-164, Method B, or VTM-102 and report the average results to the nearest 0.1 percent. When the ignition furnace is used, a correction factor shall be applied for the non-asphalt combustible materials in the RAS. Unless the actual correction factor is determined by comparing the test results on paired samples from AASHTO T-164 Method B and VTM-102, the estimated correction factor for the RAS shall be 5 percent.

Used separately or with RAP, RAS can be used to stiffen the asphalt concrete mixture binder to meet the requirements in Section 211.01 of Specifications. Asphalt surface, intermediate and base mixtures containing RAS in order to meet the asphalt concrete mixture stiffness of PG 70-16 should use PG 64-22 asphalt cement and contain the minimum RAS/RAP Percentages while not exceed the 30% maximum binder replacement criteria:

5% RAS and 0% RAP
4% RAS and 5% RAP minimum
3% RAS and 10% RAP minimum
2% RAS and 20% RAP minimum

V. STORING MATERIALS

Contractors shall store tear-off RAS by stockpiling either whole or as partial shingles which have not been shredded or shredded shingles that meet the maximum size requirements. Stockpiled RAS shall not be contaminated by dirt or other objectionable foreign materials. Blending of the shingles with fine aggregate may be necessary to prevent conglomeration of shingle particles. When fine aggregate is used for this purpose, this material shall be accounted for in the mix design.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
RECLAIMED ASPHALT SHINGLES (RAS) TABS IN ASPHALT CONCRETE

July 19, 2011

I. DESCRIPTION

This specification covers reclaimed asphalt shingles (RAS) tabs used in asphalt concrete (AC) concrete. These requirements are to be met in addition to those contained in Section 211 of the Specifications. The Contractor shall receive approval by the Engineer to use RAS tabs in the asphalt concrete.

II. MATERIALS

(a) **Tabs RAS materials** shall be produced by the manufacturing process for domestic roofing shingles. Blending or mixing of Tabs and Tear-offs shall not be permitted.

Tabs RAS materials shall be shredded prior to being incorporated in the asphalt concrete mixture so that one hundred percent of the shredded pieces are less than 1/2 inches (12.5mm) in any dimension.

Tabs RAS materials shall not contain asbestos fibers. The Contactor shall furnish the Department a certification from the manufacturer of the shingles stating that the shingles are free of asbestos. If a certification cannot be obtained then the contractor shall furnish test results of RAS sample analysis for Polarized Light Microscopy (PLM) on the shingles which certify the material to be used is free of asbestos. Testing is required at the specified rate of 1 per manufacturer per type of RAS prior to processing and results shall be submitted prior to or during the stockpile approval process.

(b) **Asphalt Binder of the asphalt concrete mixture shall be** Performance Grade (PG) of asphalt conforming to the requirements specified in Section 211of the Specifications.

III. DETAIL REQUIREMENTS

RAS tabs in asphalt concrete shall be mixed mechanically in a plant specifically designed for asphalt concrete production.

IV. JOB-MIX FORMULA

The Contractor shall submit a job mix formula in accordance to section 211.03 of the Specifications. The Contractor shall submit material samples to include the RAS stockpiled shingles, reclaimed asphalt pavement (RAP) and PG Binder.

The amount of RAS material used in the recycled mixture shall be no more than five percent of the total mixture weight. The combined percentages of RAS and RAP shall not contribute more than 30 percent of the total asphalt content (AC) of the mixture, according to the following equation:

$$\frac{\left(\%RAS_{mix} \times \%AC_{RAS}/100\right) + \left(\%RAP_{mix} \times \%AC_{RAP}/100\right)}{\%AC_{JMF}} \leq 30.0\%$$

Where:

% RAS_{mix} =	Percent RAS in the Job Mix Formula
% AC_{RAS} =	Average Percent AC in the RAS
% RAP_{mix} =	Percent RAP in the Job Mix Formula
% AC_{RAP} =	Average Percent AC in the RAP
% AC_{JMF} =	Design AC content of the JMF

The Contractor shall determine the asphalt content of the RAS using AASHTO T-164, Method B, or VTM-102 and report the average results to the nearest 0.1 percent. When the ignition furnace is used, a correction factor shall be applied for the non-asphalt combustible materials in the RAS. Unless the actual correction factor is determined by comparing the test results on paired samples from AASHTO T-164 Method B and VTM-102, the estimated correction factor for the RAS shall be 5 percent.

Used separately or with RAP, RAS can be used to stiffen the asphalt concrete mixture binder to meet the requirements in Section 211.01 of Specifications. Asphalt surface, intermediate and base mixtures containing RAS in order to meet the asphalt concrete mixture stiffness of PG 70-16 should use PG 64-22 asphalt cement and contain the minimum RAS/RAP Percentages while not exceed the 30% maximum binder replacement criteria:

5% RAS and 0% RAP
4% RAS and 5% RAP minimum
3% RAS and 10% RAP minimum
2% RAS and 20% RAP minimum

V. STORING MATERIALS

Contractors shall store tabs RAS by stockpiling either whole or as partial shingles which have not been shredded or shredded shingles that meet the maximum size requirements. Stockpiled RAS shall not be contaminated by dirt or other objectionable materials. Blending of the shingles with fine aggregate may be necessary to prevent conglomeration of shingle particles. When fine aggregate is used for this purpose, this material shall be accounted for in the mix design. Tabs shall be stockpiled separately.

S315U00-1211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
DENSE GRADED ASPHALT MIX TYPE SM-4.75

June 16, 2011c

I. DESCRIPTION

This work shall consist of the production, placement and acceptance criteria of the thin asphalt concrete material designated as type SM-4.75 in accordance with the Contract requirements, this provision, and as directed by the Engineer.

II. MATERIALS

A. **Asphalt**: The asphalt cement shall be performance graded asphalt (PG) 64-22, 70-22 or 76-22 meeting the requirements of Section 210 of the Specifications or as designated by the Engineer.

B. **RAP:** Recycled asphalt pavement material will be permitted in accordance with Table II-14A in Section 211 of the Specifications.

C. **Coarse aggregate** shall conform to the requirements of Section 203 of the Specifications, except for grading, or as directed by the Engineer.

D. **Fine aggregate** shall conform to the requirements of Section 202 of the Specifications, except for grading. The uncompacted void content shall not have a value less than 40 percent when tested in accordance with AASHTO T 304 Method A and the sand equivalent value shall not be less than 40 percent when tested in accordance with AASHTO T 176.

E. **Anti-stripping Additive** shall be hydrated lime at a rate of one percent of the total mix or a chemical anti-stripping agent, which has a proven performance in asphalt concrete using the same aggregate sources as approved by the Engineer.

III. MIX GRADATION LIMITS

The Contractor shall submit for the Engineer's approval, a job mix formula within the following design ranges of percent passing each sieve size as noted:

Table 1 - Design Ranges

Sieve Size	Percent By Weight Passing Square Mesh Sieves (in)	
	Maximum	Minimum
1/2"	-	100
3/8"	100	95
#4	100	90
#16	55	30
#200	13	6

IV. MIX VOLUMETRICS

The Contractor shall submit for the Engineer's approval, a job mix formula within the following design ranges of volumetrics as noted:

Table 2 - Mix Design and Production Criteria

Mix Type	VTM (%) Production (Note 1)	VFA (%) Design	VFA (%) Production (Note 2)	Min. VMA (%)	Fines/Asphalt Ratio (Note 3)	Number of Gyrations
						N Design
SM-4.75 Notes 1,2,3	3.0-6.0	70-75	70-80	16.5	1.0 – 2.0	50

Note 1: Asphalt content should be selected at 5.0 percent Air Voids.
Note 2: During production of an approved job mix, the VFA shall be controlled within these limits.
Note 3: Fines-Asphalt Ratio is based on effective asphalt content.

V. MIX PERMEABILITY

For mix design approval, permeability test data shall be submitted in accordance with VTM 120 using the regression method. The pill height shall be one inch. If the regression method predicts a permeability exceeding 150 x 10^{-5} cm/sec at 7.5 percent voids, the Contractor shall redesign the mixture to produce a permeability number less than 150 x 10^{-5} cm/sec.

VI. PLANT ACCEPTANCE

A lot will be considered acceptable for gradation and asphalt content in accordance with Section 211of the Specifications with process tolerances as defined Table 3 applied to the design sieves in Table 1. One adjustment point will be applied for each 1 percent that the material is out of the process tolerance for the No. 16 Sieve, applied in 0.1 percent increments, all other adjustments will be applied in accordance with Section 211.09 of the Specifications.

TABLE 3
Process Tolerance

Tolerance on Each Laboratory Sieve and Asphalt Content: Percent Plus and Minus										
No. Tests	Top Size[1]	1 ½"	1"	¾"	½"	3/8"	No. 4	No. 16	No. 200	A.C.
1	1.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	2.0	.60
2	1.0	5.7	5.7	5.7	5.7	5.7	5.7	5.7	1.4	0.43
3	1.0	4.4	4.4	4.4	4.4	4.4	4.4	4.4	1.1	0.33
4	1.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	1.0	0.30
5	1.0	3.6	3.6	3.6	3.6	3.6	3.6	3.6	0.9	0.27
6	1.0	3.3	3.3	3.3	3.3	3.3	3.3	3.3	0.8	0.24
7	1.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	0.8	0.23
8	1.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8	0.7	0.21
12	1.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	0.6	0.17

[1]Defined as the sieve that has 100% passing as defined in Table II-13.

In the event the Department determines that the mixture being produced does not conform to the approved job-mix formula and volumetric properties in Table 1 and 2 based on the Department's or Contractor's test results, the Contractor shall immediately make corrections to bring the mixture into conformance with the approved job-mix formula or cease paving with that mixture. Subsequent paving operations using either a revised or another job-mix formula that has not been verified for acceptance as described herein shall be limited to a test run of 300 tons

maximum. No further paving using that specific mixture shall occur until the acceptability of the mixture being produced has been verified using the 300-ton constraint.

A lot will be considered acceptable for permeability if each of the individual test results have a value less than 150 x 10^{-5} cm/sec at 7.5 percent voids. Mixture samples for permeability testing shall be collected at the same time volumetric samples are obtained. Permeability testing shall be performed using the regression or single point method in accordance with VTM 120. The Contractor shall provide the results of the permeability testing to the Engineer. In the event the Department or Contractor determines that the mixture being produced does not conform to the approved job-mix formula and permeability maximum value based on the Department's or Contractor's test results, the Contractor shall immediately make corrections to bring the mixture into conformance with the approved job-mix formula or cease paving with that mixture. Subsequent paving operations using either a revised or other job-mix formula that has not been verified for acceptance as described herein shall be limited to a test run of 300 tons maximum. No further paving using that specific mixture shall occur until the acceptability of the mixture being produced has been verified using the 300-ton constraint.

VII. PLACING, FINISHING AND COMPACTION

The application rates of SM-4.75 will be specified in the Contract or as directed by the Engineer.

The Contractor shall plan his operation so a continuous paving operation provides for a constant steady movement of the paver. The placement of the SM-4.75 shall be as continuous as possible and shall be scheduled such that the interruption occurring at the completion of each day's work will not detrimentally affect the partially completed work.

Immediately after the mixture has been spread and struck off, it shall be thoroughly and uniformly rolled and compacted. Breakdown rolling shall be accomplished with steel wheel roller(s) with a minimum weight of 10 tons. The mixture shall receive a minimum of three breakdown roller passes prior to intermediate and finish rolling.

Should visual examination by the Engineer reveal that the material in any load, or portion of the paved roadway is contaminated, segregated, or flushed with asphalt cement, that load, or portion of the paved roadway may be rejected without additional sampling of the material.

VIII. FIELD ACCEPTANCE

Lot Density, roller pattern and control strip density testing shall be performed per VTM-76. However, sawn cores/plugs will not be required to determine the field percentage of the maximum theoretic density for the mixture. The required density of the compacted mixture shall not be less than 98.0 percent and not more than 102.0 percent of the target control strip for the test section. Payment schedules for lot density will be accordance with Table III-4 in Section 315.05 of the Specifications.

IX. MEASUREMENT AND PAYMENT

Asphalt concrete type SM-4.75 will be measured in tons and paid for at the contract unit price per ton, which price shall include surface preparation; furnishing and applying tack coat; and all materials, additives, labor, testing and equipment necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Concrete Type SM-4.75	Ton

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
BM-25.0D WITH INCREASED ASPHALT CONTENT

July 19, 2011

I. DESCRIPTION

The work described in this special provision is specifically intended for supplying, testing and installing asphalt concrete base with additional asphalt cement. BM-25.0D+0.4 and/or BM-25.0D+0.8 shall be placed at locations identified in the contract documents.

II. MATERIALS

The Contractor shall furnish, test and install BM-25.0D with additional asphalt cement content in accordance with the requirements of this special provision. The mix(es) shall conform to all of the requirements of a standard BM-25.0D in Section 211 of the Specifications except as noted herein.

Construction and Acceptance of one or more courses of asphalt concrete consisting of BM-25.0D+0.4 or BM-25.0D+0.8 asphalt concrete base shall be in accordance with the requirements of a BM-25.0D in Section 315 of the Specifications and the density specified in Table 5 herein.

An equivalent single axle load (ESAL) will be established by the Engineer and the mix types may be specified as one of the types listed in Table 1 herein.

TABLE 1

Mix Type	Equivalent Single Axle Load (ESAL)Range (millions)	Final Asphalt Performance Grade (PG)	Aggregate Nominal Maximum Size*
BM-25.0D+0.4	All ranges	70-16	1”
BM-25.0D+0.8	All ranges	70-16	1”

Asphalt concrete shall conform to the requirements for the type designated.

*Nominal Maximum Size is defined as one sieve size larger than the first sieve to retain more than 10 percent aggregate.

Job-Mix Formulas

The asphalt concrete base mix(es) will be supplied to the project per the contract documents. To determine the AC content for the BM-25.0D plus additional asphalt cement, an approved BM-25.0D per Section 211 will be used to determine the optimum AC content and aggregate gradations. While the optimum AC content for the BM-25.0D will be selected at 2.5 percent per Section 211, the initial AC content for the BM-25.0D+0.4 and/or BM-25.0D+0.8 will be selected using the 3.5 percent air voids for the BM-25.0D. The additional asphalt cement (0.4% or 0.8%) will be added to the initial AC content at 3.5 percent air voids in order to establish the design AC content.

During production the BM-25.0D+0.4 and BM-25.0D+0.8 mixes shall be controlled according to the requirements of Table 2 herein.

TABLE 2
PRODUCTION CRITERIA

Mix Type	VTM Production (%)	VFA (%)	Min. VMA (%)	Fines/Asphalt Ratio	Number of Gyrations	
					N Design	N Initial
BM-25.0D+0.4	1.0 – 4.0	67 – 92	12.0	0.6 – 1.3	65	7
BM-25.0D+0.8	0.5 – 3.5	67 – 92	12.0	0.6 – 1. 3	65	7

1. The Laboratory mixing temperature shall be 310 °F to 320 °F and the compaction temperature shall be 295 °F to 300 °F for both testing and design.

2. Field correction factor. The field correction factor is determined by subtracting the bulk specific gravity of the aggregate from the effective specific gravity of the aggregate determined at the JMF AC content achieved.

TABLE 3
RECOMMENDED PERFORMANCE GRADE OF ASPHALT

Mix Type	Percentage of Reclaimed Asphalt Pavement (RAP) in Mix	
	%RAP < 25.0	35.0 ≥ %RAP ≥ 25.0
BM-25.0D (+0.4 and +0.8)	PG 70-22	PG 64-22

III. TESTING

When asphalt cement is extracted and recovered in accordance with AASHTO T170, the recovered asphalt cement shall meet the required grade specified in Table 1 herein.

IV. ACCEPTANCE AND ADJUSTMENTS

Acceptance and adjustments shall be in accordance with the requirements for a BM-25.0D in Section 211.08 and 211.09 of the Specifications.

V. DENSITY

Density shall be determined in accordance of Section 315.05(e) of the Specifications. The minimum density requirements for BM-25.0D+0.4 and BM-25.0D+0.8 shall be as specified in Table 5 herein.

T A B L E 5
DENSITY REQUIREMENTS

Mixture Type	Minimum Control Strip Density (%)[1]
BM-25.0D+0.4	94.0
BM-25.0D+0.8	96.0

[1] The control strip density requirement is the percentage of theoretical maximum density of the job mix formula by SUPERPAVE® mix design or as established by the Engineer based on two or more production maximum theoretical density tests.

VI. MEASUREMENT AND PAYMENT

BM-25.0D with increased asphalt content will be measured in tons and paid for at the contract unit price per ton. This price shall include all materials and labor specified in Section 315 of the Specifications as modified in this specification for asphalt concrete base.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Concrete Base Course Type BM-25.0D+0.4	Ton
Asphalt Concrete Base Course Type BM-25.0D+0.8	Ton

S315OM0-0609

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
TRENCH WIDENING ASPHALT MIXTURES
BM-25.0(T), IM-19.0D(T) or IM-19.0A(T)

October 17, 2008c

SECTION 315—ASPHALT CONCRETE PAVEMENT of the Specifications is amended as follows:

Section 315.01—Description is amended to include the following:

Certain routes in the Contract are designated to use asphalt concrete type **BM-25.0(T), IM-19.0A(T) or IM-19.0D(T)**. Those routes are referred to herein as trench widening routes.

Section 315.02—Materials is amended to add the following:

(e) **Trench widening route** materials shall conform to the requirements of Section 211 of the Specifications. IM-19.0A shall be used for **IM-19.0A(T)** and IM-19.0D shall be used for **IM-19.0D(T)**. Where **BM-25.0(T)** is designated, either BM-25.0A or BM-25.0D shall be used by the Contractor.

Section 315.05(e)2 **Surface, Intermediate and Base Courses** is amended to include the following:

Trench Widening Routes — The minimum lift density as determined in accordance with the requirements of VTM-22 is based on the type of trench widening as defined below and specified in the Contract. Where trench widening is 2 foot in width compaction may be performed with small single drum walk-behind rollers or other mechanical means acceptable to the Engineer at the Contractor's discretion.

Type 1 — Paved Shoulder Only:

Trench widening routes where the widening will serve as a paved shoulder and will not be subjected to constant traffic: The painted edge line will not be on the trench widening. The minimum density requirement will not be enforced. Steel double drum rollers weighing no less than 8 tons shall perform compaction of the asphalt concrete. No less than five passes shall be completed.

Type 2 — Widened Travel Lane and Paved Shoulder:

Trench widening routes where the widening will serve as a wider travel lane and paved shoulder that will be subjected to traffic: The widening will not include removal of existing travel lane pavement, i.e., inside the edge line marking. The painted edge line will be on the trench widening. The minimum density of **91.5** percent shall be enforced.

Type 3 — Repaired Travel Lane and Paved Shoulder:

Trench widening routes where the widening will include a portion of the existing travel lane, serve as a paved shoulder and will be subjected to traffic as a part of the travel lane: The widening will include removal of existing pavement (i.e. inside the edge line marking). The painted edge line will be on the trench widening. The minimum density of **91.5** percent will be enforced.

Where density requirements apply, the Contractor is responsible for cutting cores or sawing plugs for density testing. One set of plugs/cores per course of material shall be obtained within the first

500 linear feet and every 2,500 linear feet thereafter of the trench widening route for testing by the Contractor or the Department. Core/plug locations shall be randomly selected within each section. If the density achieved is less than **91.5** percent for the Type 2 or 3 trench widening routes, payment will be made on the theoretical tonnage within the 500 or 2,500 linear feet lot in accordance with the requirements of Table III-5 of the Specifications.

Section 315.05—Procedures is amended to include the following:

(i) **Trench widening routes** shall be widened by trenching on one or both sides of the existing roadway and placing **BM-25.0(T), IM-19.0A(T) or IM-19.0D(T)** commensurate with the required width and depth specified for that route.

Any remaining material, after final grading, shall be classified as excess material, and will be disposed of in accordance with the requirements of Section 106.04 of the Specifications or as directed by the Engineer.

The trench shall be shaped to have vertical sides, the width, depth and type as specified in the contract documents (2-foot minimum to 6-foot maximum width), be free of excess material, and shall be tacked against the existing pavement side before **BM-25.0(T), IM-19.0D(T) or IM-19.0A(T)** is placed.

The Contractor shall ensure that disruption to driveways, entrances, mail boxes and intersections are minimized and that precautions are taken to ensure that roadway drainage does not pond on the roadway surface.

Section 315.08 Measurement and Payment is amended to include the following:

Asphalt Concrete Type BM-25.0(T), IM-19.0A(T) or IM-19.0D(T) will be measured in tons and will be paid for at the contract unit price per ton, which price bid shall include furnishing and placing the **BM-25.0(T), IM-19.0A(T) or IM-19.0D(T)** mix, trenching, tack grading and disposal of excess material.

Payment will be made under:

Pay Item	**Pay Unit**
Asphalt Concrete Type BM-25.0(T)	Ton
Asphalt Concrete Type IM-19.0A(T)	Ton
Asphalt Concrete Type IM-19.0D(T)	Ton

S315R00-1209

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
RIDEABILITY

October 26, 2009

SECTION 315—ASPHALT CONCRETE PAVEMENT of the Specifications is amended as follows:

Section 315.07 Pavement Tolerances is amended to include the following:

For pavements designated in the Contract, the final ride quality acceptance will be based on the lowest average International Roughness Index (IRI) for each 0.01-mile section produced by a minimum of two test runs, using a South Dakota style road profiling device and reported for each travel lane. The device shall measure both wheelpaths with laser height sensing instruments. The Department will conduct the testing within 30 calendar days of completion of the final surface course and pavement striping over the designated section. Testing will be conducted in accordance to VTM – 106. The Department will conduct the testing as soon as possible after completion, providing the Contractor can arrange unimpeded access to the paved surface for constant highway speed test runs.

Acceptance

An IRI number in inches per mile will be established for each 0.01-mile section for each designated lane. The last 0.01-mile (52 feet) section before a bridge, the first 0.01-mile (52 feet) section after a bridge, and the beginning and end 0.01-mile (52 feet) sections of the final surface will not be subject to a pay adjustment.

Areas excluded from testing by the road profiling device will be tested using a 10-foot straightedge. The variation of the surface from the testing edge of the straightedge between any two contacts with the surface shall not be more than 1/4 inch. Humps and depressions exceeding the specified tolerance shall be subject to correction as directed by the Engineer, at no additional cost to the Department.

The following tables provide the acceptance quality of pavement based on the finished rideability for interstate and non-interstate roadways.

TABLE A - INTERSTATE SYSTEM	
IRI After Completion (Inches Per Mile)	**Pay Adjustment (Percent Pavement Unit Price)**
45.0 and Under	115
45.1-55.0	110
55.1-70.0	100
70.1-80.0	90
80.1-90.0	80
90.1-100.0	70
100.1-120.0	60 or Subject To Corrective Action
120.1-140.0	40 or Subject to Corrective Action
140.1-160.0	20 or Subject to Correction Action
Over 160.1	0 or Subject to Corrective Action

TABLE B - NON- INTERSTATE SYSTEM	
IRI After Completion (Inches Per Mile)	**Pay Adjustment (Percent Pavement Unit Price)**
55.0 and Under	115
55.1-65.0	110
65.1-80.0	100
80.1-90.0	90
90.1-100.0	80
100.1-110.0	70
110.1-130.0	60 or Subject To Corrective Action
130.1-150.0	40 or Subject to Corrective Action
150.1-170.0	20 or Subject to Corrective Action
Over 170.1	0 or Subject to Corrective Action

When the Engineer requires corrections to the pavement surface, the method of correction shall be reviewed by the Engineer and correction shall be performed at the Contractor's expense. The Engineer may require correction of any or all adjoining traffic lanes or shoulders at the Contractor's expense to assure uniform cross section. Methods of correction may include, but are not limited to diamond grinding, remove and replace, and asphalt concrete (AC) overlay.

Where corrections are made after the initial Department rideability test, the pavement will be retested by the Department to verify that corrections have produced the acceptable ride surface. Unit price disincentives or additional corrections may be required based on the retested IRI measurements as determined by the Engineer. No incentives will be provided for sections on which corrective actions have been required by the Engineer. In the event the corrective action(s) do not result in 100 percent payment, then the Contractor will be assessed the corresponding percent payment.

Single-Lift Construction

An AC layer is defined as a material lift equal to or greater than 2.5 times the maximum nominal aggregate size for the AC mix(es) specified in the Contract. A material lift less than the specified application rate or less than 2.5 times the maximum nominal aggregate size for the AC mix(es) specified in the Contract is considered a "scratch course" and not an AC layer.

Where only one AC layer shall be placed, the Department will test pavement sites subject to this special provision prior to work by the Contractor. Upon request by the Contractor, the Engineer will provide the IRI testing results. If this IRI testing is conducted more than 180 calendar days prior to the scheduled beginning of the work, the Engineer or Contractor may request new IRI testing.

Based on the average IRI (original surface and completed overlay) for each 0.1-mile length of each travel lane subject to this special provision, no corrective action will be required if the completed surface has IRI test results which indicate a 30 percent or more improvement in the ride quality. This percent improvement is based on the 0.1-mile paved section average IRI and not the individual 0.01-mile increments. When the percent improvement is achieved for a 0.1-mile section, the payments (incentives, disincentives and full payment) for the individual 0.01-mile increments will be summed. The Contractor will then be paid the greater of the total adjusted payments or 100 percent for that 0.1-mile section.

This rideability specification does not relieve the Contractor from responsibility concerning workmanship in accordance with the requirements of the Specifications, other contract requirements or as defined by the Engineer.

Incentive Only Projects

For projects designated as “incentive only”, the Contractor will not be subjected to penalties on any 0.01-mile section resulting from the final rideability results. Incentive only projects will not be subject to corrective action as a result of the rideability results.

Pay adjustments will be applied to the theoretical tonnage of the surface mix asphalt material for the lane width and section length tested.

This rideability specification does not relieve the Contractor from responsibility concerning workmanship in accordance with the requirements of the Specifications, other contract requirements or as defined by the Engineer.

Payment

Pay adjustments will be applied to the theoretical tonnage of the surface mix asphalt material for the lane width and section length tested (generally 12 feet wide and 52.8 feet long) based on testing prior to any corrective action directed by the Engineer. For the section(s) where corrective action is required, pay adjustment will be based on the testing after the corrective action has been accomplished.

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 208—SUBBASE AND AGGREGATE BASE MATERIAL

SECTION 208—SUBBASE AND AGGREGATE BASE MATERIAL of the Specifications is amended as follows:

Section 208.06—Acceptance is amended to replace the third paragraph with the following:

Determination of gradation and Atterberg limits will be based on a mean of the results of tests performed on four samples taken in a stratified random manner from each lot. Lots of 2000 tons or 4000 tons may be used at the discretion of the Engineer when warranted by annual plant shipping quantity and past performance. Samples shall be obtained by methods approved by the Engineer. Any statistically acceptable method of randomization may be used to determine the time and location of the stratified random sample to be taken. The Department shall be advised of the method to be used prior to the beginning of production.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
STABILIZED AND PAVED SHOULDER OVERLAY

July 12, 2010

I. DESCRIPTION

This work shall consist of furnishing and placing stabilized and paved shoulder overlay on existing stabilized and paved shoulder surfaces in accordance with the requirements of the Road and Bridge Standards and the Specifications. The purpose of this work is to provide a resurfaced shoulder with a slope and guardrail height that conforms to the Road and Bridge Standards, the Specifications and the requirements herein when work is completed.

II. MATERIALS

Materials for stabilized and paved shoulder overlay shall be in accordance with the applicable requirements for the materials placed at the locations indicated in the Contract.

III. PROCEDURES

The Contractor shall furnish and place stabilized and paved shoulder overlay where specified. The material shall be spread, graded, and compacted in accordance with the requirements for stabilized and paved shoulders in Section 305.03(e) of the Specifications or as indicated elsewhere in the Contract. When overlaying the existing stabilized shoulder, the material may be paced in a single lift.

At locations without guardrail or other guide device, the width of placement of stabilized and paved shoulder overlay shall be the same as the existing stabilized or paved shoulder.

At locations with guardrail or other guide device where the existing stabilized or paved shoulder does not extend to the guardrail or other guide device, the width of placement of stabilized and paved shoulder overlay shall be the same as the existing stabilized or paved shoulder.

At locations with guardrail or other guide device where the existing stabilized or paved shoulder extends to and behind the guardrail or other guide device, the width of placement of stabilized and paved shoulder overlay shall extend to the front edge of the guardrail.

The final compacted resurfaced stabilized and paved shoulder overlay slope shall be in accordance with the requirements of the applicable standard shoulder design of Road and Bridge Standards and the Specifications. At locations where existing guardrail is not disturbed or where guardrail improvements or replacements are required, the finished guardrail height shall conform to the Road and Bridge Standards when work is completed.

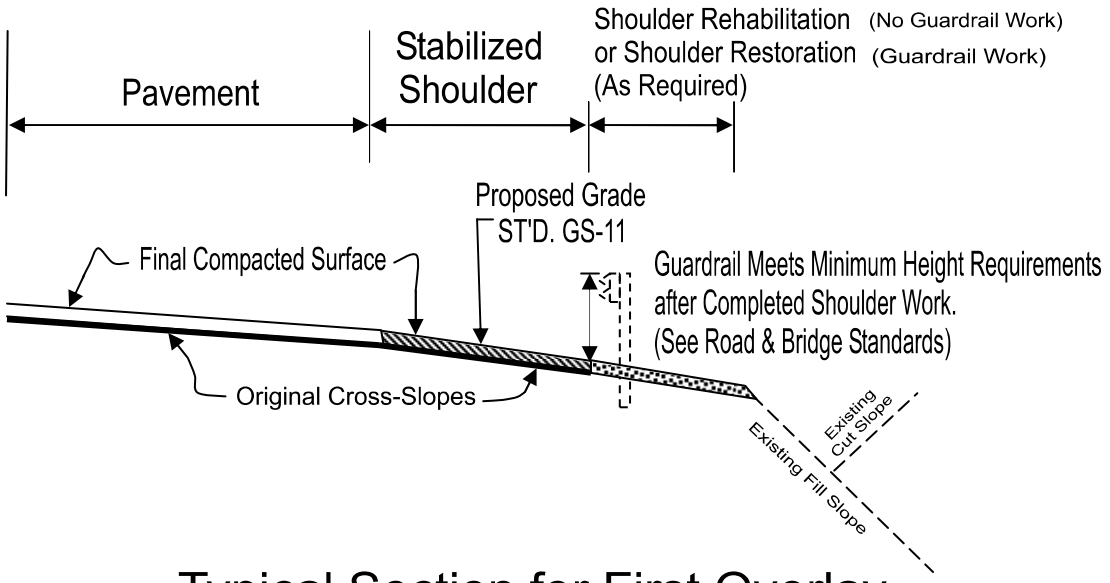
Shoulder rehabilitation and shoulder restoration shall be as applied as required in accordance with the requirements in the Special Provision for **Shoulder Rehabilitation and Restoration**.

IV. MEASUREMENT AND PAYMENT

Stabilized and paved shoulder overlay will be measured and paid for in accordance with the applicable items required for overlaying stabilized and paved shoulders.

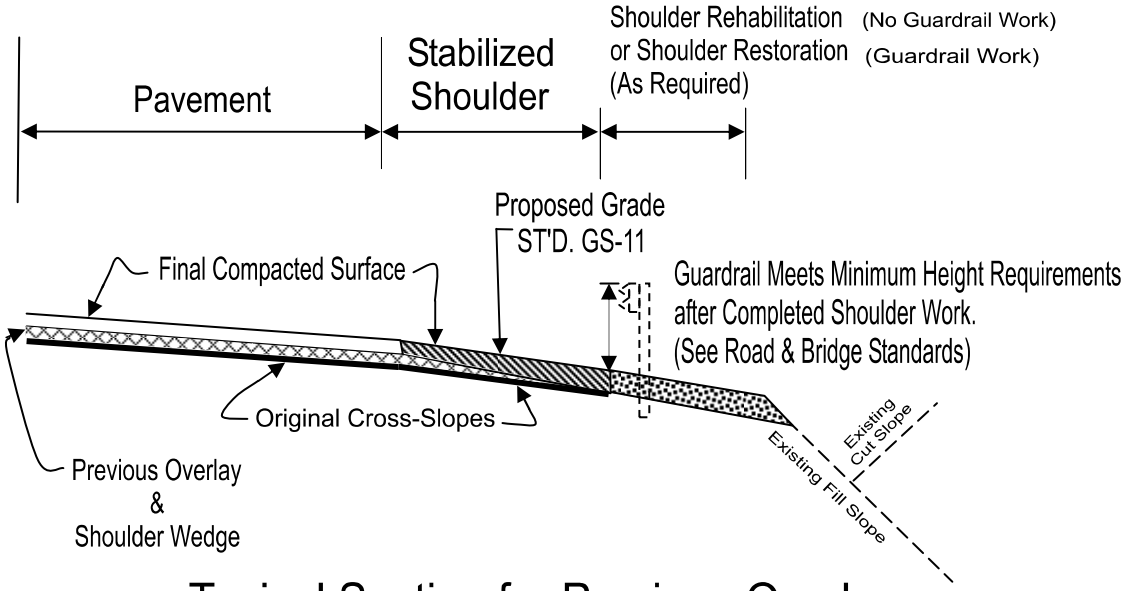
Shoulder rehabilitation and shoulder restoration will be measured and paid for in accordance with the requirements in the Special Provision for **Shoulder Rehabilitation and Restoration**.

STABILIZED AND PAVED SHOULDER OVERLAY



Typical Section for First Overlay

Not to Scale



Typical Section for Previous Overlay

Not to Scale

S305EM0-1210

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SHOULDER REHABILITATION AND RESTORATION

July 12, 2010

I. DESCRIPTION

This work shall consist of reconstructing existing low and high shoulders and shoulders disturbed due to plant mix overlay and guardrail work. The purpose of this work is to provide a shoulder slope and guardrail height that conforms to the Road and Bridge Standards, the Specifications and the requirements herein when work is completed.

II. MATERIALS

Aggregate base material (type and size specified) shall conform to section 208 of the Specifications.

III. PROCEDURES

Shoulders shall be raised or lowered by applying aggregate base material and/or machining the shoulders, where specified, to smoothly tie the graded shoulder edge elevation to the adjoining elevation of the final pavement surface edge or final paved or stabilized shoulder surface edge. The raised or lowered shoulder shall also be graded to obtain a uniform shoulder slope to the shoulder break that conforms to the applicable Road and Bridge Standards shoulder design. The guardrail height shall conform to the Road and Bridge Standards when work is completed.

The Contractor shall furnish and place aggregate base material where specified. The material shall be spread, graded, and compacted in accordance with the requirements of Section 305.03(e) of the Specifications, except for the shaping of the subgrade which will not be required.

Final pavement surface edge or final paved or stabilized shoulder surface edge shall include existing pavement not designated for overlay and completely compacted pavement overlay.

The Contractor shall promptly remove and dispose of surplus material encountered as a result of shoulder work and any shoulder material left or tracked on the pavement.

Shoulder rehabilitation work shall be in those areas that have no existing guardrail and have <u>not</u> been slated for new guardrail. Shoulder rehabilitation work shall also be in areas where existing guardrail remains undisturbed. This work shall include raising existing low shoulders or low shoulders created by plant mix overlay, and lowering existing high shoulders created by debris buildup. Aggregate base material shall be placed and the shoulder shall be graded and/or machined as necessary to provide the slope that conforms to the Road and Bridge Standards. This work shall be completed within one week following plant mix overlay and shall be applied as directed by the Engineer to accomplish this work.

Shoulder restoration work shall be only in areas slated for new guardrail, guardrail improvements or guardrail replacements in this or other contracts. This work shall include raising existing low shoulders, or low shoulders created by plant mix overlay, lowering existing high shoulders created by debris buildup, and grading shoulders and stone disturbed due to guardrail work. Aggregate base material shall be placed and the shoulder shall be graded and/or machined as necessary to provide the slope that conforms to the Road and Bridge Standards. The shoulder shall be graded and/or machined after the existing guardrail has been removed and prior to

installation of new guardrail or reinstallation of updated guardrail. This is to level any shoulder material that may have built up under the existing guardrail and to allow for the placement of aggregate base material at low shoulder areas prior to guardrail installation. The width of placement of aggregate base material and the graded and/or machined shoulders shall be as needed to allow for the installation of new guardrail or reinstallation of updated guardrail in accordance with the requirements shown in the Road and Bridge Standards and the Specifications or as indicated in the Contract. This work shall be applied as directed by the Engineer to accomplish this work.

IV. MEASUREMENT AND PAYMENT

Aggregate base material will be measured in tons. The accepted quantities of aggregate base material will be paid for at the contract unit price per ton, which shall be full compensation for furnishing, delivering, placing, compacting, grading the material, and removing and disposing of surplus, tracked and spilled material resulting from the Contractor's operations.

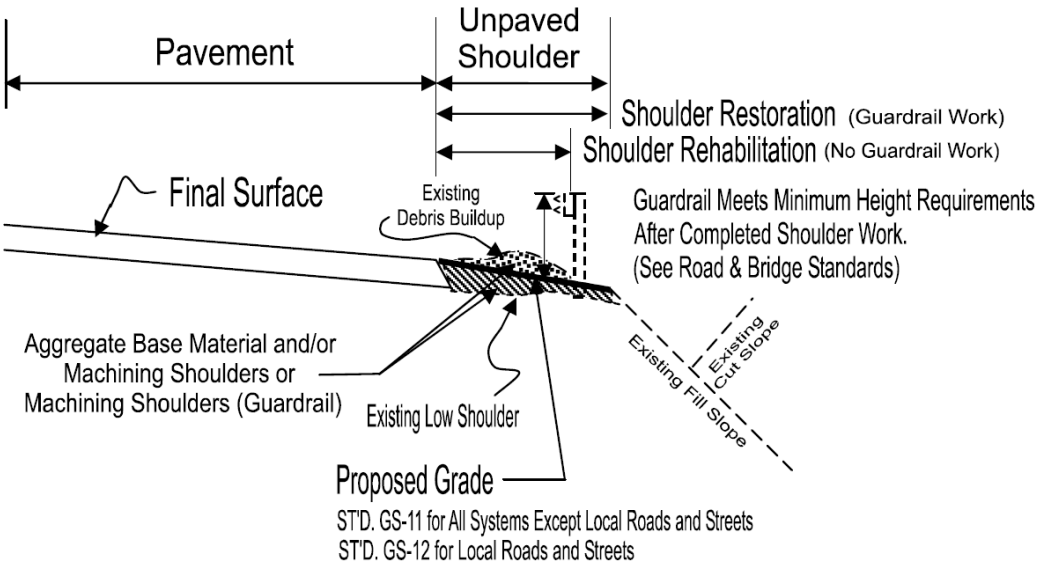
Machining shoulders will be measured in linear feet along the adjacent edge of pavement. The accepted quantities of machining shoulders will be paid for at the contract unit price per linear foot, which shall be full compensation for grading, compacting, removing and disposing of surplus, tracked and spilled material resulting from the Contractor's operations.

Machining shoulders (guardrail) will be measured in linear feet along the adjacent edge of pavement specified in the Contact of each guardrail section improvement, replacement or new installation. The accepted quantities of machining shoulders (guardrail) will be paid for at the contract unit price per linear foot, which shall be full compensation for grading, compacting, removing and disposing of surplus, tracked and spilled material resulting from the Contractor's operations.

Payment will be made under:

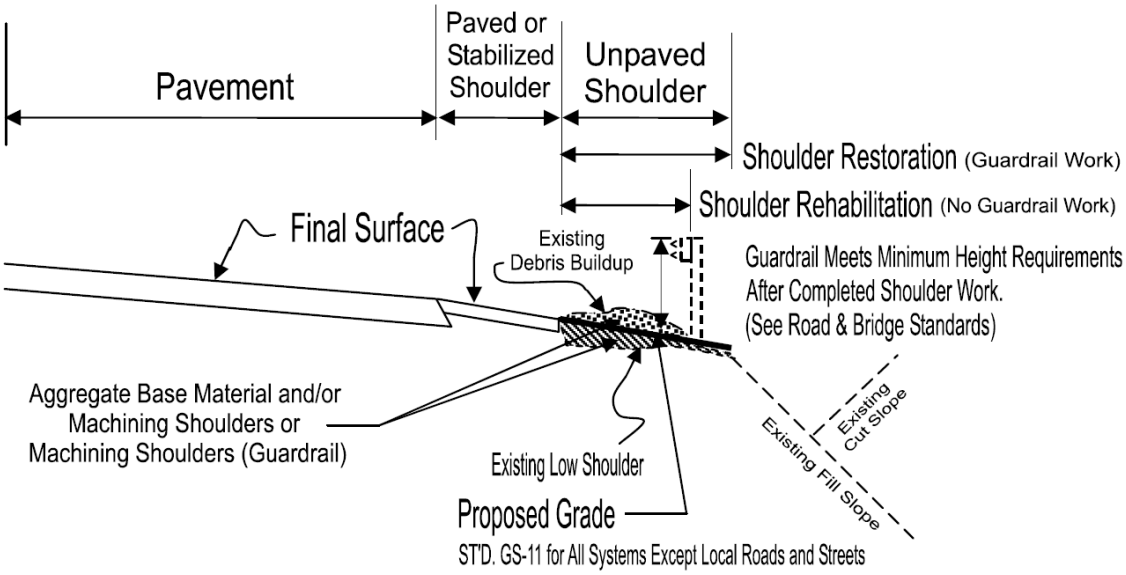
Pay Item	Pay Unit
Aggregate Base Material, Type ( ), No. ( )	Ton
Machining Shoulders	Linear Foot
Machining Shoulders (Guardrail)	Linear Foot

SHOULDER REHABILITATION AND RESTORATION



Typical Section for Unpaved Shoulder

Not to Scale



Typical Section for Paved or Stabilized Shoulder

Not to Scale

S505BM1-1211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
REPLACEMENT OF GUARDRAIL, MEDIAN BARRIER, IMPACT ATTENUATOR, AND GUARDRAIL TO BRIDGE ATTACHMENTS

November 4, 2011

I. DESCRIPTION

This work shall consist of repairing or replacing damaged guardrail, median barrier, impact attenuators and bridge/guardrail attachments, in accordance with this provision, the plans and as directed by the Engineer.

II. MATERIALS

Guardrail and guardrail components shall conform to Section 505 of the Specifications.

Impact attenuator repair shall use replacement parts from the original manufacturing company.

Sign Panels shall conform to Section 701 of the Specifications.

Guardrail Delineators shall conform to Section 702 of the Specifications.

III. PROCEDURES

The Contractor shall inspect the locations and prepare a list of materials and quantity needed for repair for the Engineers review prior to commencing work. The Engineer will notify the Contractor to repair the guardrail by components or to remove and replace sections of damaged guardrail.

The Engineer will preapprove all locations requiring the drilling of holes in bridge railings or fixed objects. The Contractor shall repair any spalling due to the drilling operations in concrete fixed objects or concrete bridge railings and existing holes in concrete shall be patched with materials conforming to Section 218 of the Specifications.

The Contractor shall perform work in accordance with Section 505 of the Specifications, the *Road and Bridge Standards* and the standard drawings for "Recommended Method for Attaching Guardrail to Bridge Rails" (BR-GR). The Contractor may need to modify the method of attachment due to field conditions with the approval of the Engineer.

The Contractor shall reconstruct impact attenuators in accordance with the manufacturers' recommendations.

Pay items with the designation "Install " are materials furnished by the Department for the Contractors use in repair of guardrail installations in accordance with Sections 505 and 510 of the Specifications and as directed by the Engineer. The Engineer will indicate per site the quantity and materials to be installed and the location of the materials for the Contractors use. The Contractor shall make arrangements with the Area Headquarters 48 hours prior to picking up the materials for installation. All sites designated for use of "Install" materials will be within 25 miles of an Area Headquarters.

Damaged and salvaged guardrail materials shall become the property of the Contractor and shall be disposed of in accordance with Section 106 of the Specifications, unless otherwise specified.

All unused or abandoned guardrail post holes shall be backfilled to existing ground level with approved material placed in layers not more than 4 inches in height. Each layer shall be compacted by tamping. All unused or abandoned post holes in paved shoulder shall be backfilled, compacted and sealed with a fine asphalt plant mix no larger than SM -9.5A. No measurement or payment will be made for this work all cost shall be included in other items of work.

Cracks in the shoulder as a result of driving or removing guardrail posts shall be repaired at no additional cost to the Department. In soil or aggregate stabilized shoulders, cracks and voids around the posts shall be filled with like material and thoroughly compacted. In asphalt paved or surfaced treated shoulders, cracks and voids around post shall be filled, compacted, and sealed with fine asphalt plant mix no larger than SM-9.5A. No measurement or payment will be made for this work all cost shall be included in other items of work.

The Contractor shall ensure all existing guardrail and end treatments left in place are correct and all bolts, are torqued properly and cables are taut.

All guardrail to be removed shall start at the run off end and proceed to the run on end terminal, unless otherwise approved by the Engineer.

Guardrail installation shall start at the run on end terminal and proceed to the run off end, unless otherwise approved by the Engineer.

All guardrail that is removed during the course of the work day shall be replaced the same work day, unless otherwise approved by the Engineer.

No fixed objects, which includes but not limited to bridge parapet walls, piers, blunt ends, sign structures, shall not be left unprotected. The Contractor shall use an approved NCHRP 350 approved, temporary guardrail terminal or impact attenuator service before the end of each workday to protect traffic from the fixed object. No measurement or payment will be made for temporary guardrail terminal or impact attenuator service, all cost shall be included in other items of work. The Contractor shall plan and prosecute the work accordingly.

No uncompleted sections of guardrail shall be left over weekends or holidays, unless otherwise approved by the Engineer. The Contractor shall plan and prosecute the work accordingly.

All aggregate and other material placed at the guardrail terminal end section shall be included in the pay item "guardrail terminal site preparation".

Build-up or debris under existing guardrail in areas where guardrail is to be replaced shall be removed to the original shoulder cross slope, in accordance with the contract Special Provisions.

Reset existing guardrail shall require the removal and disassembly of the existing w-beam and blockouts to redrill the post for the reassembly of the blockouts and w-beam to the required height specified. In the event the existing post or blockouts are determined non-compliance with the standard drawings or specifications new post or blockouts will be required and will be measured and paid for separately.

IV. MEASUREMENT AND PAYMENT

Guardrail, Reuse Guardrail, Radial Guardrail, Median Barrier, Radial Median Barrier, Cable Barrier, Guardrail Terminal, Median Barrier Terminal and **Fixed Object Attachment** will be measured and paid for in accordance with Section 505 of the Specifications.

Remove Guardrail, Reset Guardrail and **Install Guardrail** will be measured and paid for in accordance with Section 510 of the Specifications.

Sign Panel and **Guardrail Delineator** will be measured and paid for respectively in accordance with Sections 701 and 702 of the Specifications.

Drill Hole will be measured in units of each and will be paid for at the contract unit price per each, which unit price shall include drilling of hole, repairing spalled areas, and patching abandoned holes.

Re-Tension Existing Cable GR. will be measured in units of each per cable system and will be paid for at the contract unit bid price per each for the standard specified, which shall include re-tensioning the existing cable.

The items below will include removal and disposal of existing guardrail components in the unit price bid.

Guardrail Post, Guardrail Blockout and **Offset Block** will be measured in units of each for the type and standard specified and will be paid for at the contract unit price per each which price shall include furnishing and installing post, blockout and offset block and hardware.

W Beam Terminal Connector, W Beam End Section and Terminal Connector will be measured in units of each for the standard or type specified and will be paid for at the contract unit price per each, which shall include furnishing and placement, and mounting hardware.

Rubrail will be measured in units of linear feet for the type specified and will be paid for at the contract unit price per linear foot, which shall include furnishing and placement of type rubrail specified, and mounting hardware.

Guardrail Beam and Radial Guardrail Beam will be measured in units of linear feet for the type and standard specified and will be paid for in units of linear foot, which unit price shall include furnishing the type and standard beam specified, and mounting hardware.

Plate will be measured in units of each for the type and standard specified and which unit paid shall include furnishing and placing the specified plate and mounting hardware.

Cable will be will be measured in units of linear feet for the type and standard specified and will be paid for in units of linear foot, which unit price bid shall include furnishing the type and standard cable specified, and mounting hardware.

Realign Post will be measured in units of each and will be paid for at the contract bid price per each, which unit price bid shall include disconnecting and reconnecting rail and realigning the post.

BR-GR Attachment will be measured in units of each, for the type specified per attachment location and will be paid for at the contract unit bid price per each attachment, which shall include furnishing and installing guardrail, blockouts, connector, and hardware.

Steel Tube will be measured in units of each for the type and standard specified and will be paid for at the contract bid price per each, which shall include furnishing and placing of the steel tube, and excavation.

Assembly will be measured in units of each for the type and standard specified and will be paid for at the contract unit bid price per each, which shall include furnishing and placing the specified assembly.

Cable Assembly & Anchor Plate will be measured in units of each for the type and standard specified and will be paid for at the contract unit bid price, which shall include furnishing and installing the cable assembly and anchor plate for the type and standard specified, and hardware.

End Post Caps will be measured in units of each for the standard specified and paid for at the contract unit bid price per each, which shall include furnishing and installing end post caps, and hardware.

Hook Bolt will be measured in units of each for the standard specified and will be paid for at the contract unit bid price per each, which unit price bid shall include furnishing and installing hook bolts.

Angle will be measured in units of each for the type and standard specified and will be paid for at the contract unit bid price per each, which shall include furnishing and installing the specified angle, and hardware.

Soil Plate will be measured in units of each for the standard specified and will be paid for at the contract unit price per each for the standard specified, which shall include furnishing and installing the specified plate, and hardware.

Pipe Sleeve will be measured in units of each for the standard specified and will be paid for at the contract unit price per each for the standard specified, which shall include furnishing and installing the specified pipe sleeve, hardware and removal and disposal of existing pipe sleeve.

Cable Anchor Bracket will be measured in units of each for the standard specified and will be paid for at the contract unit price per each for the standard specified, which shall include furnishing and installing the specified cable anchor bracket, and hardware.

Strut will be measured in units of each for the standard specified and will be paid for at the contract unit price per each for the standard specified, which shall include furnishing and installing the specified strut, and hardware.

Guardrail Extruder will be measured in units of each for the standard specified and will be paid for at the contract unit price per each for the standard specified, which shall include furnishing and installing the specified guardrail extruder, and hardware.

Impact Attenuator Cartridge will be measured in units of each for the original manufacturers' replacement cartridge and will be paid for at the contract unit price per each for the original manufacturers replacement part and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Nose Section will be measured in units of each for the original manufacturers' replacement nose section and will be paid for at the contract unit price per each for the original manufacturers' replacement part and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Diaphragm will be measured in units of each for the original manufacturers' replacement diaphragm and will be paid for at the contract unit price per each for the original manufacturers' replacement part and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Frame will be measured in units of each for the original manufacturers replacement frame and will be paid for at the contract unit price per each for the original manufacturers' replacement part and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Side Panel will be measured in units of each for the original manufacturers' replacement side panel and will be paid for at the contract unit price per each for the original manufacturers' replacement part and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Sand Barrel will be measured in units of each for the original manufacturers replacement sand barrel and will be paid for at the contract unit price per each for the original manufacturers replacement parts and hardware, which shall include furnishing and installing in accordance with the manufacturers recommendations.

Reset Existing Guardrail will be measured in units of linear feet and will be paid for at the contract unit price per linear foot. This price shall include removal of guardrail w-beam and blockouts, drilling new hole(s) in the existing post, reinstalling the w-beam and blockouts, with new hardware.

Remove and Relocate Existing Guardrail (Standard) will be measured in units of linear feet for the standard and type specified and will be paid for at the contract unit price per linear foot for the standard and type specified. This price shall include disassembly and removal of guardrail w-beam, post, blockouts, hardware, backfilling existing postholes, repairing damage to shoulders, curbing, curb backup material or concrete, transporting and storing; repairing and installing salvaged beam; and installing guardrail post, blockouts, w-beam, delineators, concrete, and new hardware.

Reuse Existing Guardrail W-Beam (Standard) will be measured and paid for at the contract unit price per linear foot. The price bid shall include salvaging and installing existing W-beam, transporting w-beam to the site, furnishing and installing new post, blockouts, delineators, new hardware.

Payment will be made under:

Pay Item	**Pay Unit**
(Type) Post (Standard)	Each
Guardrail Blockout	Each
Guardrail Beam	Linear Foot
Radial Guardrail Beam	Linear Foot
Cable (Standard)	Linear Foot
Offset Block (Type)	Each
Terminal Connector (Type or Standard)	Each
W Beam End Section (Type)	Each
Rubrail (Type)	Linear Foot
BR-GR Attachment (Type)	Each
Drill Hole	Each
(Type) Plate (Standard)	Each
Realign Post	Each
Steel Tube (Standard)	Each
(Type) Assembly (Standard)	Each
Cable Assembly & Anchor Plate (Standard)	Each
End Post Caps (Standard)	Each
Hook Bolt (Standard)	Each
(Type) Angle (Standard)	Each
Re-Tension Existing Cable GR. (Standard)	Each
Soil Plates (Standard)	Each
Pipe Sleeve (Standard)	Each
Cable Anchor Bracket (Standard)	Each
(Type) Strut (Standard)	Each

Guardrail Extruder (Standard)	Each
Impact Attenuator Cartridge	Each
Nose Section	Each
Diaphragm	Each
Side Panel	Each
Frame	Each
Sand Barrel	Each
Reset Existing Guardrail	Linear Foot
Remove And Relocated Existing Guardrail (Standard)	Linear Foot
Reuse Existing Guardrail W-Beam (Standard)	Linear Foot

S512LM8-1012

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
SECTION 512—MAINTAINING TRAFFIC
(ASPHALT SCHEDULES)

September 28, 2012

SECTION 512—MAINTAINING TRAFFIC of the Specifications is amended as follows:

Section 512.01—Description is replaced by the following:

This work shall consist of maintaining and protecting traffic through areas of construction, maintaining public and private entrances and mailbox turnouts, and protecting the traveling public within the limits of the project in accordance with the requirements of the *Virginia Work Area Protection Manual (VWAPM)*, the "Typical Traffic Control" notes and drawings herein, and the Contract documents or as directed by the Engineer.

Section 512.03—Procedures is amended to include the following after the second paragraph:

The Contractor shall use the requirements in the traffic control layout details in the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, and the Contract for control of traffic during the resurfacing of roadway pavements. The "Typical Traffic Control" notes and drawings herein shall be considered as amendments added to the *Virginia Work Area Protection Manual.* In the event the work site requires a different layout or a modification of the aforementioned layouts, the Engineer must approve the Contractor's design prior to use.

Traffic Groups based on the vehicles per day (ADT) are as follows:

Traffic Group	ADT	Traffic Group	ADT
I	0-9	X	2,000-2,999
II	10-24	XI	3,000-3,999
III	25-49	XII	4,000-4,999
IV	50-99	XIII	5,000-5,999
V	100-249	XIV	6,000-9,999
VI	250-399	XV	10,000-14,999
VII	400-749	XVI	15,000-19,999
VIII	750-999	XVII	20,000-29,999
IX	1,000-1,999	XVIII	30,000-39,999
		XIX	40,000 & over

Section 512.03—Procedures is amended to replace (a) and (b) with the following:

(a) **Signs:** The Contractor shall furnish and install temporary sign panels necessary for the project which shall include but not be limited to, maintenance of traffic, and begin and end of construction. The Contractor shall also furnish and install those signs not listed in the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, or the Contract (such as "**Loose Gravel**", "**Unmarked Pavement Ahead**", and "**Low Shoulder**") that may be required by the Engineer to ensure the safety of the traveling public for this project.

Signs and their placement shall conform to the requirements of the *Virginia Work Area Protection Manual*, the *MUTCD*, the "Typical Traffic Control" notes and drawings herein, the Contract documents and as directed by the Engineer. The Contractor shall submit to

the Engineer a sketch of his proposed construction sign layout for approval prior to installation. The Contractor shall furnish supports, i.e., wood posts and barrier and wall attachments, and hardware for use with the temporary sign panels. In lieu of using wood posts, the Contractor may request permission from the Engineer to use alternate products on the Special Products Evaluation List. The request shall contain all information related to the manufacturer's installation requirements, including but not limited to, post spacing and the square footage of sign panel the product can support based on AASHTO's requirements for a wind speed of 60 miles per hour. The Contractor shall be responsible for covering, uncovering, or removing and reinstalling existing signs that conflict with the signs needed for maintenance of traffic. Covering of existing signs shall be accomplished in accordance with the requirements of Section 701.03(d) of the Specifications. The Contractor shall furnish and install flags for the temporary sign panels as directed by the Engineer except flags will not be required for use on portable sign supports. Signs shall be installed and attached to wooden supports in accordance with Standard WSP-1 of the Department's *Road and Bridge Standards.* The size and number of wooden supports shall be in accordance with the standard drawings. When alternate products for supports are approved for use by the Engineer, the supports, including size and number, and signs shall be installed in accordance with the manufacturer's recommendation.

Retroreflective flexible sign base materials conforming to the requirements of Section 247 of the Specifications for material that is not Type VI material may be used both day and night up to a maximum of three continuous days.

The Contractor may furnish portable sign stands for mounting temporary sign panels in accordance with the following:

1. Portable sign stands for sign installations, their placement and allowed time of use in lieu of post installation shall conform to the requirements of the *Virginia Work Area Protection Manual*, the *MUTCD*, , the "Typical Traffic Control" notes and drawings herein, the Contract documents and as directed by the Engineer.

2. Portable sign stands shall be used with signs having a substrate material of the type required in Section 512.02(e) of the Specifications and only those that were tested and found to be in compliance with the requirements of *NCHRP Report 350,* Test Level 3, or otherwise accepted in an FHWA acceptance letter for the specific sign stand.

Portable sign stands shall conform to the requirements of *NCHRP Report 350,* Test Level 3, and shall be selected from those shown on the Department's Approved List or the Contractor shall submit a certification letter submitted prior to their use stating the brands and models of portable sign stands to be used along with a copy of the FHWA acceptance letter indicating compliance with *NCHRP Report 350,* Test Level 3. Portable sign stands shall be self-erecting and shall accommodate signs of the shape being used. Portable sign stands shall support a 20-square-foot sign panel in sustained winds of 50 miles per hour without tipping over, walking, or rotating more than ±5 degrees about its vertical axis. Additional weight consisting of no more than one 25-pound sandbag placed on each leg or no more than two cone weights or one drum collar positioned on the center of the sign stand and around the mast may be used to comply with this requirement. When used on uneven surfaces, the portable sign stand shall be capable of adjusting to those surfaces to allow the signs to be installed in their normal upright position ±15 degrees. Portable sign stands shall include decals, stenciling, or other durable marking system that indicates the manufacturer and model number of the stands. Such marking shall be of sufficient size so it is legible to a person in a standing position.

The Contractor shall erect, maintain, move, and be responsible for the security of sign panels and shall ensure an unrestricted view of sign messages for the safety of traffic.

The Contractor shall maintain and store signs furnished by the Department in a manner approved by the Engineer until they are returned to the Department.

When construction signs are covered to prevent the display of the message, the entire sign shall be covered with silt fence or other materials approved by the Engineer such that no portion of the message side of the sign shall be visible. Plywood shall be used on ground-mounted construction signs only. Attachment methods used to attach the covering material to the signs shall be of a durable construction that will prevent the unintentional detachment of the material from the sign. At no times shall a construction sign and/or post be rotated to prevent the display of the message. In addition, the posts where the signs are being covered shall have two ED-3 Type II delineators mounting vertically on the post below the signs at a height of 4 feet to the top of the topmost delineator. The bottom delineator shall be mounted 6 inches below the top delineator.

(b) **Flagger Service and Pilot Vehicles:** The Contractor shall provide flagger in accordance with the requirements of Section 105.14(c) of the Specifications.

1. **Interstate routes:** When one-way traffic is approved, the Contractor shall provide flagger service and, where necessary, pilot vehicles to maintain traffic. Each vehicle shall be equipped with at least one roof-mounted rotating amber flashing light and shall display required signs while in service.

   The Contractor may be permitted to use two-way radio communications in lieu of pilot vehicles in appropriate traffic conditions, when approved by the Engineer.

   Portable traffic control signals conforming to the requirements of Section 512.03(h)2 of the Specifications may be used in lieu of flagger service when specified or approved by the Regional Traffic Engineer. When portable traffic control signals are used in lieu of flagger service the portable traffic control signals will be measured and paid for separately.

2. **Non-Interstate routes:** When one-way traffic is approved, the Contractor shall provide flagger service and, where necessary, pilot vehicles to maintain traffic. Each vehicle shall be equipped with at least one roof-mounted rotating amber flashing light and shall display required signs while in service.

   The Contractor may be permitted to use two-way radio communications in lieu of pilot vehicles in appropriate traffic conditions, when approved by the Engineer.

   The contractor may be allowed to use Automatic Flagger Assistance Devices (AFAD) in lieu of flaggers on two-lane roadways when approved by the Engineer. When AFAD units are allowed, they shall be controlled by a certified flag person.

   Portable traffic control signals conforming to the requirements of Section 512.03(h)2 of the Specifications may be used in lieu of flagger service when specified or approved by the Regional Traffic Engineer. When portable traffic control signals are used in lieu of flagger service the portable traffic control signals will be measured and paid for separately.

   The Contractor shall have no less than one flagger at the beginning and one flagger at the ending of each work site on roadways having less than 2,000 vehicles per day (ADT). The Contractor shall have no less than two flaggers at the beginning and two flaggers at the ending of each work site on roadways having over 2,000 ADT. When the Engineer determines additional flaggers are necessary at the work site, the Contractor shall furnish them. On a divided highway the Engineer will instruct the Contractor where flaggers shall be

stationed. Pilot trucks shall be used on all roads where modified seal treatments, seal treatments using latex modified emulsified asphalt (CRS-2L) and other seal treatments on roads having more than of 49 ADT are being placed, unless otherwise directed by the Engineer.

Section 512.03(q) **Portable Changeable Message Signs** (PCMS) is amended to replace the last sentence of the fifth paragraph the following:

In these circumstances, the cost for such additional units that are authorized by the Engineer shall be in accordance with the requirements of Section 512.04 herein.

Section 512.03(q) **Portable Changeable Message Signs** (PCMS) is amended to delete the last paragraph.

Section 512.03 Procedures is amended to add (r) **Work Zone Traffic Control** as the following:

(r) **Work Zone Traffic Control**: The Contractor shall provide individuals trained in Work Zone Traffic Control in accordance with the requirements of Section 105.14 of the Specifications.

Section 512.04—Measurement and Payment is replaced as follows:

Maintenance of Traffic in accordance with traffic control layout detail items required by the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, and the Contract will be paid for at the lump sum price per schedule as designated in the Contract. Such traffic control shall include furnishing, erecting, installing or employing and maintaining traffic control devices. Payment for traffic control will be made incrementally as a percentage on the lump sum price based on the percentage of tonnage or square yards (as with slurry seal, latex and surface treatment contracts) and placed on the schedule for the payment period covered by the appropriate progress estimate.

Additional traffic control layout detail items that are determined and authorized by the Engineer to be necessary to ensure the safety of the traveling public and are **in addition** to the number required by the traffic control layout details in the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, and the Contract, will be measured and paid for as follows, therefore, the provisions of Section 104.02 of the Specifications will not apply:

- **Flagger service** shall include furnishing certified flagger, **STOP/SLOW** paddles and safety equipment. Where additional flagger service is required, as determined and authorized by the Engineer, flagger service will be measured in hours and paid for at the rate of **$15** per hour of use.

  When flagger service is used for the Contractor's convenience, such as for ingress and egress of construction equipment or materials, payment will not be made. **Note:** The required flaggers described in the two flagging conditions in Section 512.03(b)2. herein will not be measured as a separate pay item but will be considered incidental to the traffic control operations described.

- **Pilot vehicles** shall include furnishing vehicles, necessary warning devices, drivers, fuel and maintenance. Where additional pilot vehicles are required as determined and authorized by the Engineer, such vehicles will be measured in hours of actual use and will be paid for at the rate of **$23** per hour of employed use.

- **Electronic arrows** shall include furnishing arrow panels, fuel, maintenance, and a truck or trailer having flashing amber warning lights for mobility of the electronic arrow. Where additional electronic arrows are required as determined and authorized by the Engineer,

electronic arrows will be measured in hours of actual use and will be paid for at the rate of **$5** per hour for each hour of employed use.

- **Warning lights** for use on sign panels or installed on traffic barrier service will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include maintaining, relocating, and removing.

- **Group 1 channelizing devices** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items.

- **Group 2 channelizing devices**, not designated in the Contract as a separate pay item but where additional Group 2 channelizing devices are required as determined and authorized by the Engineer, these will be measured in days and paid for at the rate of **$1** per day per device. This price shall include furnishing and maintaining devices, removing devices when no longer required and signs. When group 2 channelizing devices are moved to a new location or are removed and re-installed at the same location, they will be measured for separate payment. However, when group 2 channelizing devices are moved within the lane or from one lane to another by simply moving the devices across the lane edge line without removal from the roadway, no additional payment will be made.

- **Traffic barrier service** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include warning lights, delineators, barrier vertical panels, fixed object attachments, patching restraint holes, fixed object attachments used on traffic barrier service in locations where existing guardrail is in place including restoring existing guardrail to its original condition, maintaining, and removing traffic barrier service when no longer required.

- **Traffic barrier service guardrail terminal** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing, installing, moving to a new location as directed or approved by the Engineer, and removing when no longer needed.

- **Impact attenuator service** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include Impact attenuators used with barrier openings for equipment access.

- **Construction pavement markings** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing marking materials, preparing the surface, adhesive, installation, maintaining, removing removable markings when no longer required, inspections, and testing.

- **Construction pavement message markings** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include marking materials, preparing the surface, adhesive, maintaining, and removing removable markings when no longer required.

- **Temporary pavement markers** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing and installing pavement markers, surface preparation, adhesive, and maintaining and replacement of lost or damaged markers and removing the pavement markers and adhesive when no longer required.

- **Temporary construction pavement markings**, including **flexible temporary pavement markers (FTPMs)** used in substitution of temporary construction pavement markings, will be

measured and paid for in accordance with the *Special Provision for* ***TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS*** included in the Contract.

- **Aggregate material** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include preparing the grade and furnishing, placing, maintaining, and removing material as required.

- **Type III barricades** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include furnishing and placing barricades, retroreflective sheeting, maintaining, relocating to new locations and removing when no longer required.

- **Construction signs** except those already required by the Contract (which includes those signs required by the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, and such signs as "**Loose Gravel**", "**Unmarked Pavement Ahead**", and "**Low Shoulder**" that may be required by the Engineer to ensure the safety of the traveling public due to the nature of the Contractor's operations) when determined and authorized by the Engineer, will be measured in square feet and paid for at **$20** per square foot. This payment, based on square footage, shall be compensation for furnishing, placing, relocating, covering, uncovering, and removing the sign(s) when no longer needed for the duration of the project; multiple payments for the same sign used more than once will not be allowed. Such extra signs will consist of either a greater number of the standard signs already listed in the applicable traffic control layout details in the *VWAPM*, the "Typical Traffic Control" notes and drawings herein, and the Contract, or other signs included in the *VWAPM* but not originally considered applicable for use on this Contract.

- **Truck mounted attenuators**, not designated in the Contract as a separate pay item but where additional Truck Mounted Attenuators are required as determined and authorized by the Engineer, these will be measured in hours of actual use required, and will be paid for at the rate of **$22** per employed hour. This price shall include furnishing the truck mounted attenuator, mounting vehicle, lights, electronic arrows, if allowed but not required, and maintenance. When electronic arrows are used at the option of the Contractor in lieu of the rotating or high intensity amber strobe light, the cost of the electronic arrow shall be included in the price for truck mounted attenuators. When electronic arrows are required and authorized as determined by the Engineer and not incidentally mounted (and permitted) on such truck mounted attenuator support vehicles, they will be paid for separately as specified herein.

- **Portable traffic control signal** will not be measured for separate payment. The cost thereof shall be included in the price for other appropriate pay items. This shall include portable traffic control signal equipment, installation, energy source, maintaining, adjusting, aligning, removing and relocating equipment.

- **Portable Changeable Message Signs (PCMS)**, not designated in the Contract as a separate pay item but where additional Portable Changeable Message Signs are required as determined and authorized by the Engineer, these will be measured in hours of actual use and paid for at the rate of **$15** per hour for each hour of employed use. This price shall be full compensation for furnishing or mobilizing the unit(s) to the project, maintenance, operation, and repositioning the unit(s).

Eradication of existing pavement markings will be measured in linear feet of a 6-inch width or portion thereof as specified herein. Widths that exceed a 6-inch increment by more than 1/2 inch will be measured as the next 6-inch increment. Measurement and payment for eradication of existing pavement markings specified herein shall be limited to linear pavement line markings. Eradication of existing pavement markings will be paid for at the contract unit price per linear foot. This price shall include removing linear pavement line markings and disposing of residue.

Eradication of existing nonlinear pavement markings will be measured in square feet based on a theoretical box defined by the outermost limits of the nonlinear pavement marking. Nonlinear pavement markings shall include but not be limited to stop bars, arrows, images and messages. Eradication of existing nonlinear pavement markings will be paid for at the contract unit price per square foot. This price shall include removing nonlinear pavement markings and disposing of residue.

Basic Work Zone Traffic Control – Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

Intermediate Work Zone Traffic Control - Separate payment will not be made for providing a person to meet the requirements of Section 105.14 of the Specifications. The cost thereof shall be included in the price of other appropriate pay items.

Temporary construction pavement markings, including **flexible temporary pavement markers (FTPMs)** used in substitution of temporary construction pavement markings, will be measured and paid for in accordance with the *Special Provision for* ***TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS*** included in the Contract.

Payment will be made under:

Pay Item	**Pay Unit**
Maintenance of Traffic (Schedule)	Lump Sum
Eradication of existing pavement marking	Linear foot
Eradication of existing nonlinear pavement marking	Square foot

Typical Traffic Control
End of Day Signing for Partial Road Width Plant Mix Paving Operations on a Multi-Lane Highway (Uneven Travel Lanes)
(Figure TTC-57.0)
NOTES

Standard:

1. **On roadways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.**

2. **The maximum pavement edge drop-off between traffic lanes shall be 2.0 inches or less.**

3. **Open travel lane(s) shall not be exposed to more than 2 to 4 mile sections of milled or uneven surface.**

4. **A portable changeable message sign (PCMS) with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**

5. **A BUMP sign (W8-1) shall be placed approximately 1000 feet in advance of the end of the pavement drop-off on Limited Access Highways. See Note 10 for sign spacing on all other roadways.**

6. **The Regional Traffic Engineer shall determine speed reductions.**

7. **The UNEVENS LANE (W8-11), STAY IN LANE (R4-9) and BUMP (W8-1) signs shall be adjusted daily with the work operation and their sign stands shall be weighted with a 25 ± pound sand bag on each leg. Additional UNEVEN LANES signs shall be installed every 2 miles and on entrance ramps.**

8. **Where conditions warrant, ROUGH ROAD (W8-8) and BUMP signs shall be installed 500'± in advance of the affected roadway surface on entrance ramps and BUMP signs shall be installed 500'+ in advance of the unaffected roadway surface on exit ramps.**

9. **All signs shall be post mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

10. *Sign spacing distance should be 1300'-1500' for Limited Access Highway, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

11. *Portable barrier mounted sign stands should be considered for use on median barrier to meet requirements of Note 1 for double indicating signs.*

Option:

12. Only traffic control signing for partial road width pavement resurfacing resulting in uneven travel lanes is shown. Other devices may be used for the control of traffic through the work area.

13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

14. **If used, the LOW SHOULDER sign shall be repeated at 1-mile intervals if the condition extends over a distance in excess of 1-mile.**

15. **The SHOULDER DROP OFF (W8-V5) sign shall be used to warn of a shoulder condition where there is an elevation difference of 2 inches or greater between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

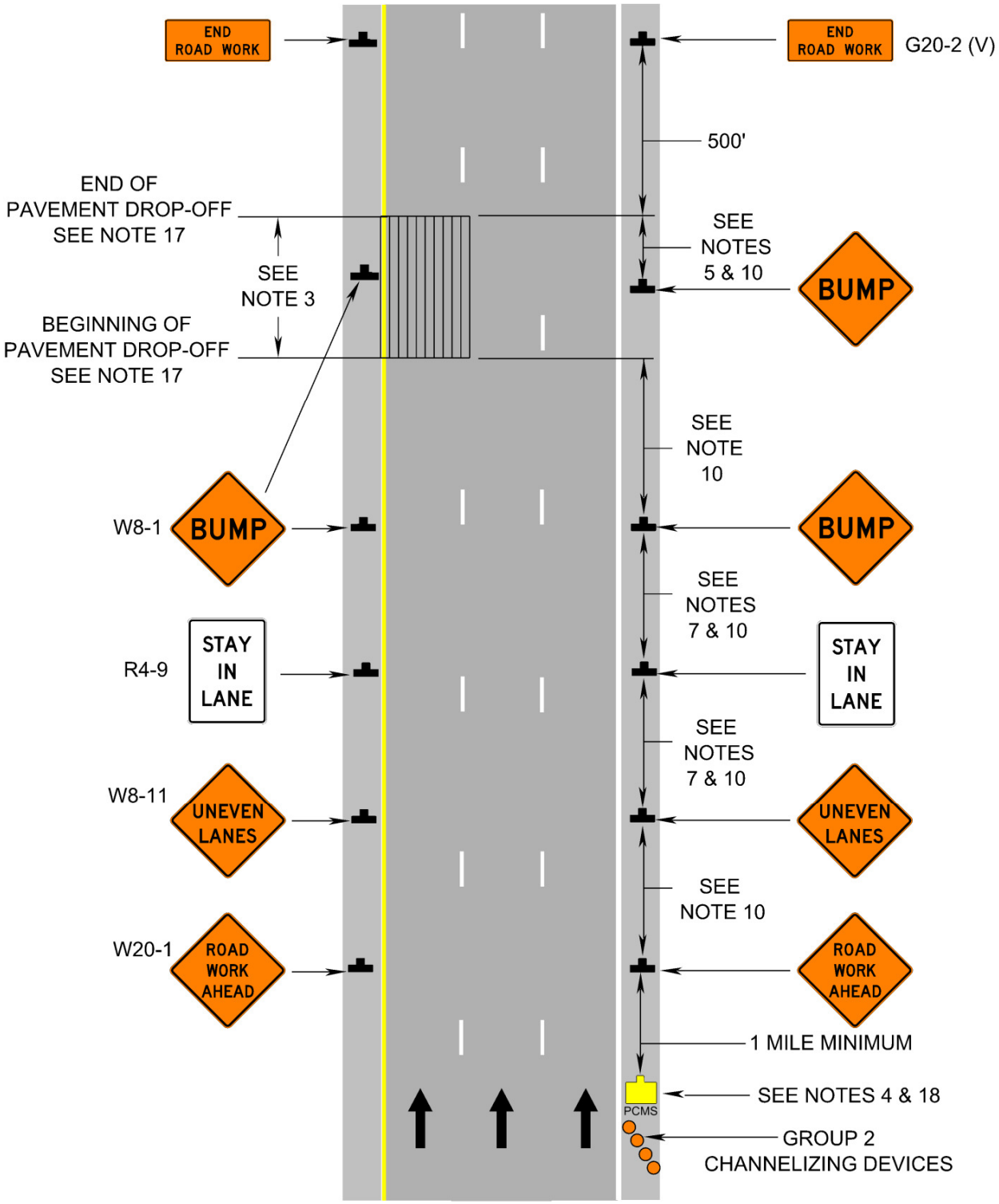
16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:

17. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s).**

18. **A minimum of four (4) Group 2 channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation.**

19. **If temporary construction or permanent pavement markings cannot be installed in accordance with the *Special Provision for TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS* then flexible temporary pavement markers (FTPMs) spaced at 20-foot centers for two-way traffic shall be placed in between the two centerlines stripes or three FTPMs shall be installed per skip line for lane division lines. No Edge line markers will be required.**



End of Day Signing for Partial Road Width Plant Mix Paving Operations on a Multi-Lane Highway (Uneven Travel lanes)
(Figure TTC-57.0)

Typical Traffic Control

End of Day Signing for Plant Mix Paving Operations Across the Entire Width of a Multi-Lane Highway
(Figure TTC-58.0)
NOTES

Standard:

1. **On roadways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determine the total width of the shoulder.**

2. **The maximum pavement edge drop-off between traffic lanes shall be 2.0 inches or less.**

3. **Open travel lane(s) shall not be exposed to more than 2 to 4-mile sections of milled or uneven surface.**

4. **A portable changeable message sign (PCMS) with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**

5. **A BUMP sign (W8-1) shall be placed approximately 1000 feet in advance of the end of the pavement drop-off on Limited Access Highways. See Note 10 for sign spacing on all other roadways.**

6. **The Regional Traffic Engineer shall determine speed reductions.**

7. **The ROUGH ROAD (W8-8) and UNMARKED PAVEMENT AHEAD (W8-V4) signs shall be adjusted daily with the work operation and their sign stands shall be weighted with a 25 ± pound sand bag on each leg. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**

8. **Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350'± in advance of the affected roadway surface on entrance ramps and BUMP signs shall be installed 500'+ in advance of the unaffected roadway surface on exit ramps.**

9. **All signs shall be post mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

10. *Sign spacing distance should be 1300'-1500' for Limited Access Highways, and on all other roadways 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*

11. *Portable barrier mounted sign stands should be considered for use on median barrier to meet requirements of Note 1 for double indicating signs.*

Option:

12. Traffic control signing for multiple lane full roadway width pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.

13. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

14. **If used, the LOW SHOULDER sign shall be repeated at 1-mile intervals if the condition extends over a distance in excess of 1-mile.**

15. **The SHOULDER DROP OFF (W8-V5) sign shall be used to warn of a shoulder condition where there is an elevation difference of 2 inches or greater between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

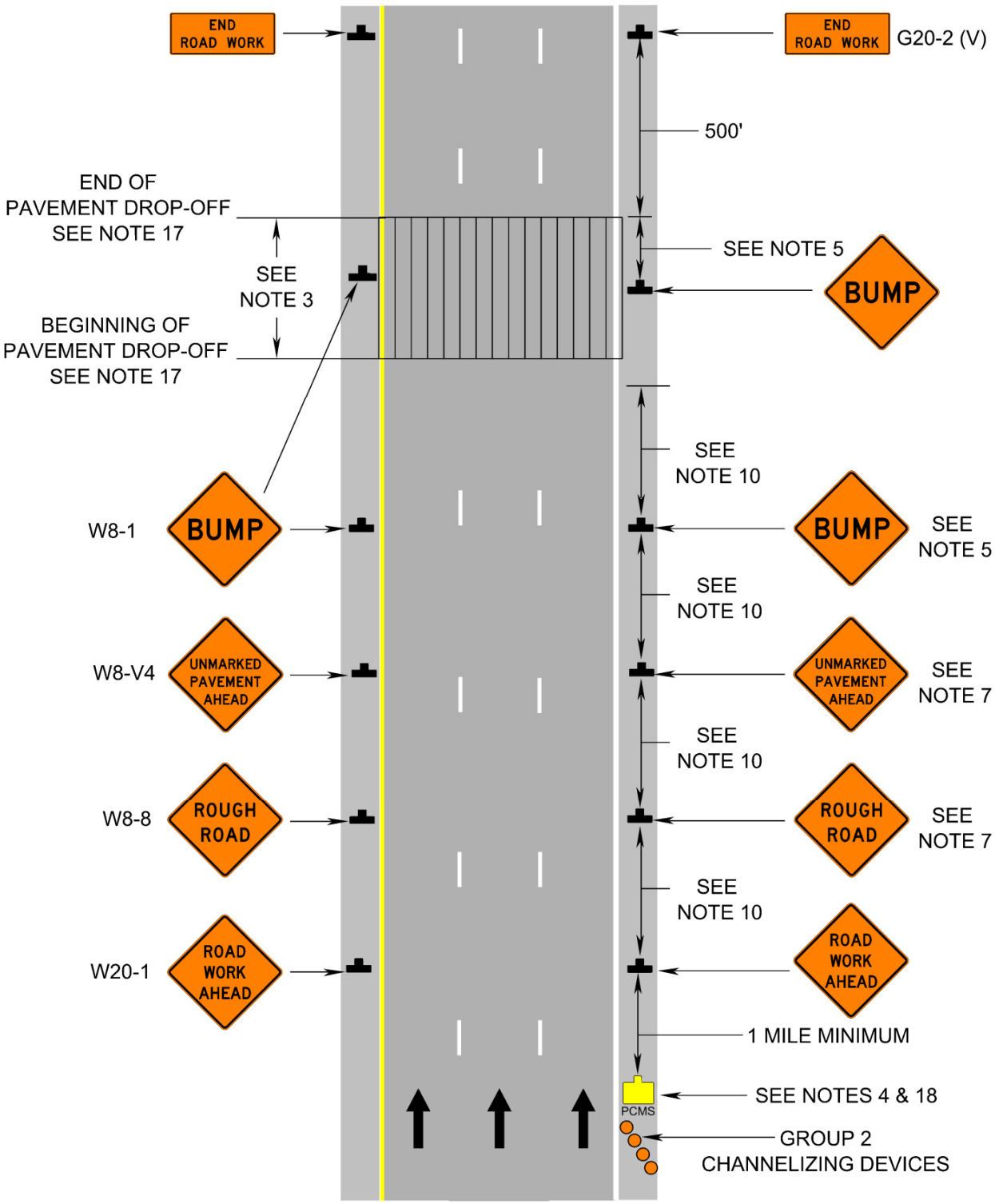
16. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:

17. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s).**

18. **A minimum of four (4) Group 2 channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation.**

19. **If temporary construction or permanent pavement markings cannot be installed in accordance with the *Special Provision for TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS* then flexible temporary pavement markers (FTPMs) spaced at 20-foot centers for two-way traffic shall be placed in between the two centerlines stripes or three FTPMs shall be installed per skip line for lane division lines. No Edge line markers will be required.**



Typical Traffic Control
End of Day Signing for Plant Mix Paving Operations Across the Entire Width of a Multi-Lane Highway
(Figure TTC-58.0)

Typical Traffic Control
End of Day Signing for Plant Mix Paving Operations on a Two-Lane Roadway
(Figure TTC-59.0)
NOTES

Standard:

1. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**

2. **The maximum pavement edge drop-off shall be 2.0 inches or less.**

3. **NO CENTER LINE sign (W8-12) shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present. In addition, NO CENTER LINE signs shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles is the unmarked area is longer than 4 miles.**

4. **A DO NOT PASS sign (R4-1) shall be used when the centerline has been obliterated or until pavement markings have been installed. The DO NOT PASS sign shall be located after the NO CENTER LINE sign. Thereafter the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles or every 2 miles if the unmarked area is longer than 4 miles.**

5. **In the vicinity of a turning lane, a BUMP sign (W8-1) shall be installed.**

6. **The UNEVENS LANE sign (W8-11) and BUMP sign shall be adjusted daily with the work operation and their sign stands shall be weighted with a 25 ± pound sand bag on each leg. Additional UNEVEN LANES signs shall be installed every mile.**

7. **Signs shall be post mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

8. *(Reserved for future use.)*

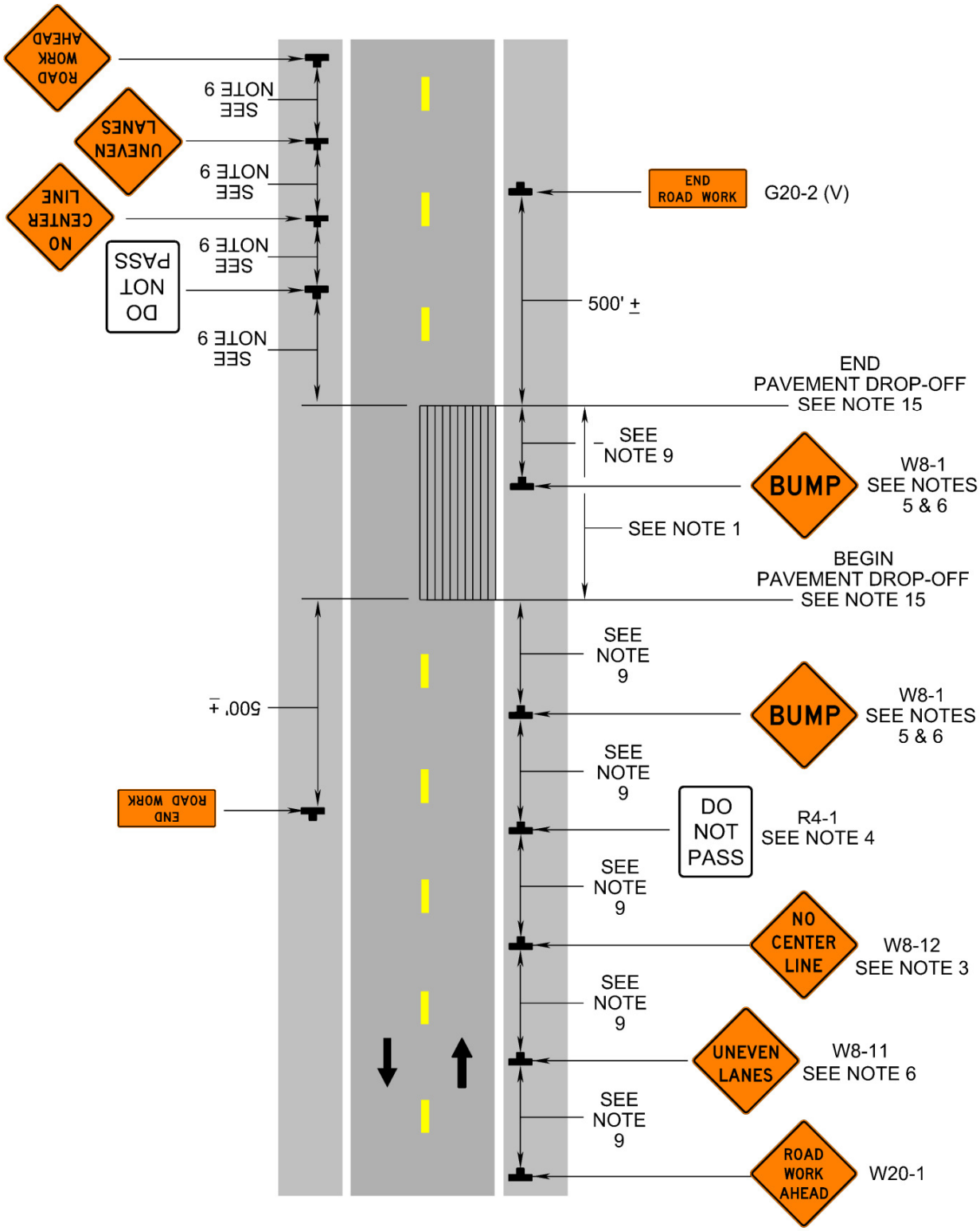
9. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less and 500'-800' where the posted speed limit is greater than 45 mph.*

Option:

10. Only traffic control signing for pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.

11. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

12. Either the NO CENTER LINE or NO CENTER STRIPE sign may be used until July 1, 2014, after which time only the NO CENTER LINE (W8-12) sign will be allowed.



Typical Traffic Control
End of Day Signing for Plant Mix Paving Operations on a Two-Lane Roadway
(Figure TTC-59.0)

Typical Traffic Control
End of Day Signing for Surface Treatment, Slurry Seal and Latex Emulsion Treatment Operations
NOTES

Standard:

1. **LOOSE GRAVEL (W8-7) signs shall be installed on surface treated roadways and shall be removed when the roadway has been swept or loose gravels have been removed from the roadway.**

2. **NO CENTER LINE (W8-12) signs shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present. In addition, NO CENTER LINE signs shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles if the unmarked area is longer than 4 miles.**

3. **A DO NOT PASS (R4-1) sign shall be used when the centerline has been obliterated or until pavement markings have been installed. The DO NOT PASS sign shall be installed after the NO CENTER LINE sign and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg. Thereafter, the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles or every 2 miles if the unmarked area is longer than 4 miles.**

4. **Signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

5. **If temporary construction or permanent pavement markings cannot be installed in accordance with the *Special Provision for TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS*, then yellow flexible temporary pavement markers (FTPMs) spaced at 20-foot centers for two-way traffic shall be placed along the centerline for lane division. No edge markers will be required**.

Guidance:

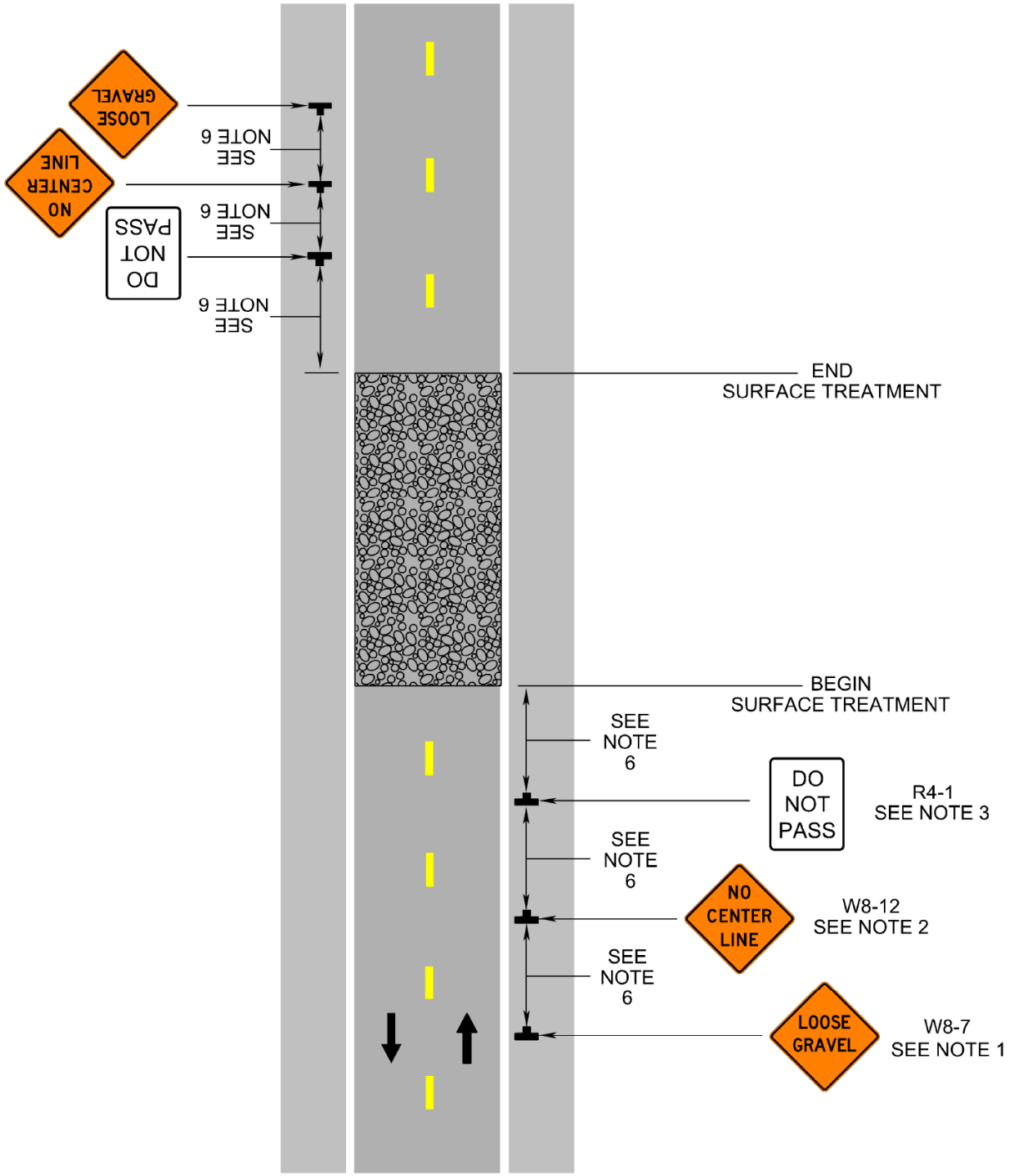
6. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*

Option:

7. Only traffic control signing for surface treatment/slurry seal/latex emulsion treatment operations is shown. Other devices may be used for the control of traffic through the work area.

8. Either the NO CENTER LINE or NO CENTER STRIPE sign may be used until July 1, 2014, after which time only the NO CENTER LINE (W8-12) sign will be allowed.

9. The advanced warning signs shown may also be used on multi-lane roadways, replacing the NO CENTER LINE signs with UNMARKED PAVEMENT AHEAD (W8-V4) signs and adding a ROAD WORK AHEAD (W20-1) sign as the first advanced warning sign.



End of Day Signing for Surface Treatment, Slurry Seal and Latex Emulsion Treatment Operations

VIRGINIA DEPARTMENT OF TRANSPORTATION
2007 ROAD AND BRIDGE SUPPLEMENTAL SPECIFICATIONS

SUPPLEMENTAL SECTION 704—PAVEMENT MARKINGS AND MARKERS

SECTION 704—PAVEMENT MARKINGS AND MARKERS of the Specifications is amended as follows:

TABLE VII-1 PAVEMENT MARKINGS is replaced with the following:

TABLE VII-1
Pavement Markings

Type	Class	Name	Surface Temp. at Time of Application	Film Thickness (mils)	Pavement Surface	Application Limitations
A		Traffic paint	50°F+	15 ± 1 when wet	AC HCC	May be applied directly after paving operations
B	I	Thermoplastic Alkyd	50°F+	90 ± 5 when set	AC	May be applied directly after paving operations
	I	Thermoplastic Hydrocarbon	50°F+	90 ± 5 when set	AC	Do not apply less than 30 days after paving operations
	II	Preformed Thermoplastic	50°F+	120-130	AC HCC	Manufacturer's recommendations
	III	Epoxy resin	50°F+	20 ± 1 when wet	AC HCC	Pavement surface needs to be at least 1 day old
	IV	Plastic-backed preformed Tape	(Note 1)	60 - 90	AC HCC	Manufacturer's recommendations
	VI	Profiled preformed Tape	(Note 1)	(Note 1)	AC HCC	Manufacturer's recommendations
	VII	Polyurea	(Note 1)	20 ± 1 when wet	AC HCC	Manufacturer's recommendations
D	I & II	Removable tape	(Note 1)	(Note 1)	AC HCC	Construction zone pavement marking
E		Removable Black tape (Non-Reflective)	(Note 1)	(Note 1)	AC	Construction zone pavement marking for covering existing markings
F	I & II	Temporary markings	(Note 1)	40 max	AC HCC	Construction zone pavement marking

Note 1: In accordance with manufacturer's recommendation.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
TEMPORARY CONSTRUCTION AND PERMANENT PAVEMENT MARKINGS

September 28, 2012

SECTION 704—PAVEMENT MARKING AND MARKERS of the Specifications is amended as follows:

Section 704.02—Materials is amended to add the following:

(d) **Flexible temporary pavement markers (FTPMs)** shall consist of products from the Department's current Approved List found in the Materials Division's *Manual of Instructions* (See Flexible temporary pavement marker (FTPM) or web site http://www.virginiadot.org/business/materials-download-docs.asp. All FTPMs shall be new product. FTPMs are suitable for use one year after the date of receipt when stored in accordance with the manufacturer's recommendations.

Section 704.03—Procedures is amended to replace the first six paragraphs with the following:

PERMANENT AND TEMPORARY PAVEMENT MARKINGS AND FLEXIBLE TEMPORARY PAVEMENT MARKERS (FTPMs)

- **Permanent pavement markings** are durable pavement markings that, when installed, provide final traffic guidance after all operations related to the project are complete in accordance with the provisions herein, Section 704 of the Specifications and as specified elsewhere in the Contract.

  Permanent pavement markings shall include skip-line and solid-line centerline markings, skip-line and solid-line lane-division markings and, solid-line edge-line markings installed on the newly-placed roadways once the surface has cured.

- **Temporary construction pavement markings** are construction zone pavement markings that, when installed, provide limited-duration traffic guidance until permanent pavement markings are installed in accordance with Section 704 of the Specifications, as specified elsewhere in the Contract, and as follows:

  Temporary construction pavement markings for surface treatment, slurry seal, latex emulsion treatment, and plant mix shall be:

  Type F, Class I pavement markings in accordance with the provisions of Section 704 of the Specifications except with a modified application for paved surfaces. Such modification shall consist of the light application of Type F, Class I temporary traffic paint, 8 to 10 mils thick representing 75 percent of the final pavement marking width and with 3 pounds of glass beads per gallon of material.

  Temporary construction pavement markings applied to planed (milled) surfaces to be overlaid shall consist of a light application of Type F, Class I temporary traffic paint 15 mils thick, representing 75 percent of the final pavement marking width and with 6 pounds of glass beads per gallon of material.

  Glass beads shall conform to the requirements of Section 234 of the Specifications. Skip lines shall be applied in 8-foot lengths and approximately 32 foot gaps. Temporary Type F, Class I pavement markings shall be arranged and spaced on

their installation so as to be completely covered by the application of permanent pavement markings. Failure to place Type F, Class I temporary markings at the application rate and spacing specified herein may result in the non-payment for such markings. No eradication of such modified Type F, Class I temporary markings will be required when the Contractor installs such temporary construction pavement markings as detailed herein and such markings have been in place for no less than 3 days prior to the application of permanent pavement markings.

Temporary construction pavement markings for plant mix shall also include:

- Type D construction pavement markings in accordance with the requirements of Section 704 of the Specifications.

- **Flexible temporary pavement markers (FTPMs)** are pavement markings that the Contractor may choose to substitute for Type D or Type F, Class I pavement markings. FTPMs may be used on surface treatment, slurry seal, latex emulsion treatment, and plant mix.

  FTPMs used for surface treatment, slurry seal or latex emulsion treatment operations shall include a removable material covering the reflective lens to protect the lens from being obscured or damaged by the paving operation.

  The color of FTPM units and their reflective surfaces (white or yellow) shall be the same as the temporary construction pavement markings for the type of application (skip-line, solid line) they are being used in substitution.

  FTPMs may be used to simulate skip-line and solid-line centerline markings and to simulate skip-line and solid-line lane-division markings (in accordance with the details furnished herein) installed on the newly-placed roadways once the surface has cured. **Please note:** Temporary edge-line markings will not be required.

Temporary construction pavement markings (and FTPMs) shall include skip-line and solid-line centerline markings, and skip-line and solid-line, lane-division line markings installed on the newly-placed roadways once the surface has cured or on milled surfaces when the time limits for unmarked pavement for the respective volumes of vehicles in Section 704 has been exceeded . **Please note:** Temporary edge-line markings will not be required.

MAINTENANCE OF TEMPORARY PAVEMENT MARKINGS AND FLEXIBLE TEMPORARY PAVEMENT MARKERS (FTPMs)

Maintenance of Temporary construction pavement markings applied to paved surfaces shall be in accordance with the following requirements:

While in place, temporary construction pavement markings sizes, shapes and retroreflectivity shall be at least minimally visible under full nighttime conditions from any point adjacent to such marking for no less than 120 feet (3 skip lines). If temporary construction pavement markings meet the requirement for this visual evaluation, no additional application (refreshing) is required. If temporary construction pavement markings are Type F, Class I and these markings do not meet this visual evaluation prior to the time limit for the application of permanent markings, such temporary markings shall be refreshed by the application of a lighter application (applied so as to enhance visibility but not as to require eradication before application of permanent markings) of Type F, Class I marking at the Contractor's expense when required by the Engineer. Under such circumstances no payment for the eradication of pavement markings will be permitted if required before the application of permanent markings. If other types of permitted temporary pavement markings are used and these fail the visual evaluation or in any other respect are

deficient prior to the time for the installation of permanent markings, these types shall be reapplied at the Contractor's expense when required by the Engineer. These requirements will apply until permanent pavement markings are installed in accordance with the time restrictions in Section 704.

FTPMs shall be installed and maintained in accordance with the manufacturer's recommendations and the requirements of the following:

The Contractor shall maintain FTPMs for the time period specified herein or until permanent pavement markings are installed in accordance with Section 704 of the Specifications. Damaged or missing FTPMs shall be replaced with new FTPMs of the same manufacturing type, color and model. No more than one FTPM may be damaged or missing out of every broken line simulated segment. No two consecutive FTPMs may be damaged or missing on a simulated solid line application, and no more than 30 percent of the FTPMs may be damaged or missing on any measured 100-foot segment of simulated solid line.

The acceptable ambient air temperature, ambient moisture condition and pavement surface condition prior to the installation of the appropriate FTPMs shall be in accordance with the manufacturer's recommendations, a copy of which shall be provided to the Engineer prior to installation.

Once applied, FTPMs will be considered for a single use. If a FTPM is removed before permanent markings are installed, it shall be replaced with a new FTPM. FTPMs may remain in place, undamaged, after installation for up to 14 consecutive days. When FTPMs are applied prior to pavement placement, such as with surface treatment, slurry seal and latex emulsion treatment, this 14 consecutive-day time limit shall begin at the time of actual installation of the FTPMs, not at the time of pavement placement completion. In no case shall any installed FTPMs be permitted to remain once time limits require permanent pavement marking installation.

PAVEMENT MARKING AND FLEXIBLE TEMPORARY PAVEMENT MARKER (FTPM) OPERATIONS

The Contractor shall have a Pavement Marking Technician, certified in accordance with the Department's Materials Certification Program for Pavement Marking, present during all pavement marking and marker operations except FTPM operations. When the Contractor chooses to substitute FTPMs for temporary construction pavement markings a certified Pavement Marking Technician will not be required for the FTPM operations.

- **Permanent Pavement Markings:** The type, class, installation procedures and time limits of permanent pavement markings shall be in accordance with the provisions specified herein and Section 704 of the Specifications.

  Installation of permanent pavement marking shall not exceed the 14 calendar-day time limitation between pavement placement and completion of permanent pavement marking installation. Once permanent pavement marking operations have begun; all skip-line and solid-line centerline markings and skip-line and solid-line lane-division markings shall be completed before the operation is stopped. While the installation of edge lines will not be required during the same operation as permanent centerline and lane-division markings; edge lines shall be completed within 14 calendar days after the end of the workday when the pavement to be marked was placed.

- **Temporary construction pavement markings:** The type, class, installation procedures and time limits of temporary construction pavement markings shall be in accordance with the provisions specified herein and Section 704 of the Specifications.

  Temporary construction pavement markings, including skip lines, and solid lines shall be installed at the same locations that permanent pavement markings shall be installed.

  Once temporary construction pavement marking operations have begun, all skip-line and solid-line centerline markings, and skip-line and solid-line lane-division markings shall be completed before the marking operation is stopped. The installation of temporary edge-line markings will not be required.

  Installation and refreshing of (as authorized by the Engineer, if necessary) temporary construction pavement markings shall not affect the 14 calendar-day time limitation between pavement placement and completion of permanent pavement marking installation.

- **Flexible temporary pavement markers (FTPMs):** The type, installation procedures and time limits for the use of FTPMs shall be in accordance with the manufacturer's recommendations, the provisions specified herein and Section 704 of the Specifications.

  Prior to installing FTPMs the Contractor shall submit a plan for substituting FTPMs for temporary construction pavement markings to the Engineer for approval. The Contractor's plan for FTPMs shall be in accordance with the requirements and drawings designated as "**TYPICAL PLAN FOR FTPM PLACEMENT**" included herein.

  For surface treatment, slurry seal or latex emulsion treatment operations, the appropriate FTPMs shall be installed <u>prior</u> to placing new pavement or treatment. Upon completion of surface treatment, slurry seal or latex emulsion treatment placement, the Contractor shall remove the protective covering from the reflective lens of the FTPM prior to leaving the work site. Failure to remove such covering may result in the non-payment for that portion type (skip or solid) of temporary pavement marking.

  For plant mix operations, the appropriate FTPMs shall be installed on the newly-placed pavement <u>after</u> the pavement is thoroughly compacted, has cooled to the FTPMs manufacturer's recommended temperature for installation, and the surface has cured.

  Prior to installing FTPMs, the pavement surface shall be free of dirt, dust, debris, moisture, oil, and any residue that may be detrimental to successful application. If such is present, the Contractor shall prepare the pavement surface by air blowing or thorough brushing.

  FTPMs used to simulate skip lines and solid lines shall be installed at the same locations that permanent pavement markings shall be installed.

  Once FTPM operations have begun, all skip-line and solid-line centerline markings, and skip-line and solid-line lane-division markings shall be completed <u>before</u> the operation is stopped. Please note: Temporary edge-line markings will not be required.

  FTPMs shall be removed and properly disposed of when permanent pavement marking is required in accordance with the time limits specified herein. Used FTPMs removed from the pavement when no longer needed or permitted, including all containers, packaging, damaged FTPMs and all other miscellaneous items of waste shall be appropriately disposed of in a properly permitted waste container in accordance with applicable local, state and federal laws and regulations.

Replacement of FTPMs, required to maintain temporary marking, shall not affect the 14 calendar-day time limitation between pavement placement and completion of permanent pavement marking installation.

For newly-placed roadways, permanent pavement marking, temporary construction pavement marking or FTPM installation shall be completed in accordance with the time limits specified below unless otherwise directed by the Engineer. Exceptions to the below time limits will be granted only for weather restrictions and for installation of Type B, Class VI and epoxy resin pavement markings on plant mix roadways. Installation of Type B, Class VI, pavement markings on plant mix roadways are not applicable to these requirements if they are inlaid with the last pass of the asphalt roller or directly after the asphalt roller using a separate roller. Installation of epoxy resin pavement markings on newly placed plant mix pavement shall not commence until after 24 hours of final surface placement.

PERMANENT PAVEMENT MARKINGS, TEMPORARY CONSTRUCTION PAVEMENT MARKINGS AND FLEXIBLE TEMPORARY PAVEMENT MARKERS (FTPMs) INSTALLATION TIME LIMITS ON ROADWAYS OPEN TO TRAFFIC:

Surface Treatment Operations

The Contractor shall maintain temporary construction pavement markings until the permanent pavement markings are installed. The Contractor shall sweep surface treated roadways prior to installation of permanent pavement markings as directed by the Engineer but no earlier than 7 days after completion of surface treatment placement. Permanent pavement marking installation shall be completed after sweeping but within 14 calendar days after the end of the workday when the surface treatment pavement surface to be marked was placed.

The following governs the installation time limits for temporary construction markings or FTPMs:

- **Roads having traffic volumes of 10,000 ADT or more:** Temporary construction pavement markings shall be installed within 24 hours after the end of the workday the unmarked new surface treatment is placed, and maintained until the permanent pavement markings are installed. If FTPMs are used they shall be installed prior to placement of surface treatment.

- **Roads having traffic volumes between 3,000 and 10,000 ADT:** Temporary construction pavement markings shall be installed within 48 hours after the end of the workday the unmarked new surface treatment is placed, and maintained until the permanent pavement markings are installed. If FTPMs are used they shall be installed prior to placement of surface treatment.

- **Roads having traffic volumes of 3,000 ADT or less:** Temporary construction pavement markings or FTPMs will not be required unless determined and authorized by the Engineer to be necessary to ensure the safety of the traveling public. If the Engineer requires FTPMs, such markers shall be installed prior to placement of surface treatment.

Slurry Seal or Latex Emulsion Treatment Operations

Permanent pavement marking installation shall be completed within 14 calendar days after the end of the workday when the slurry seal or latex emulsion treatment pavement surface to be marked was placed.

The following governs the installation time limits for temporary construction markings or FTPMs. The Contractor shall maintain temporary construction pavement markings until the permanent pavement markings are installed:

- **Roads having traffic volumes of 10,000 ADT or more:** Temporary construction pavement markings shall be installed within 24 hours after the end of the workday the unmarked new slurry seal or latex emulsion is placed, and maintained until the permanent pavement markings are installed. If FTPMs are used they shall be installed prior to placement of slurry seal or latex emulsion treatment.

- **Roads having traffic volumes between 3,000 and 10,000 ADT:** Temporary construction pavement markings shall be installed within 48 hours after the end of the workday the unmarked new slurry seal or latex emulsion is placed, and maintained until the permanent pavement markings are installed. If FTPMs are used they shall be installed prior to placement of slurry seal or latex emulsion treatment. .

- **Roads having traffic volumes of 3,000 ADT or less:** Temporary construction pavement markings shall be installed within 72 hours after the end of the workday the unmarked new slurry seal or latex emulsion is placed, and maintained until the permanent pavement markings are installed. If FTPMs are used they shall be installed prior to placement of slurry seal or latex emulsion treatment.

Plant Mix Operations

Prior to the end of the workday the Contractor shall determine whether permanent pavement markings can be installed within 24 hours after the end of the workday. If the Contractor determines that permanent pavement markings can be installed within such time limits, the permanent pavement markings shall be installed. If the Contractor determines that permanent pavement markings cannot be installed within such time limits he shall install and maintain temporary construction pavement markings or FTPMs until the permanent pavement markings are installed. **Permanent pavement marking installation shall be completed within 14 calendar days after the end of the workday when the plant mix pavement surface to be marked was placed.**

- **Roads having traffic volumes of 10,000 ADT or more:** Permanent pavement markings, temporary construction pavement markings or FTPMs shall be installed within 24 hours after the end of the workday the unmarked plant mix is placed.

- **Roads having traffic volumes between 3,000 and 10,000 ADT:** Permanent pavement markings, temporary construction pavement markings or FTPMs shall be installed within 48 hours after the end of the workday the unmarked plant mix is placed.

- **Roads having traffic volumes of 3,000 ADT or less:** Permanent pavement markings, temporary construction pavement markings or FTPMs shall be installed within 72 hours after the end of the workday the unmarked plant mix is placed.

Section 704.04—Measurement and Payment is amended to add the following:

Permanent pavement markings will be measured and paid for as the appropriate pavement line marking or pavement message marking pay items and pay units specified in the Contract. For roadways that are surface treated, the cost of sweeping the roadway prior to installing permanent pavement markings shall be included in the price bid for such pavement line or message marking items.

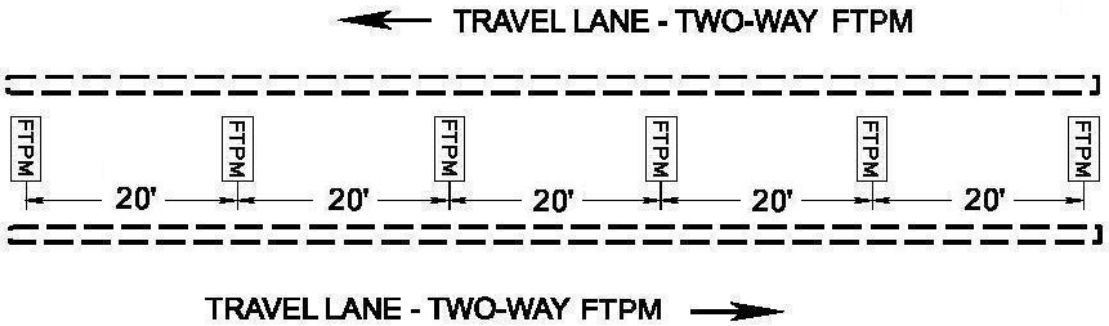
Temporary construction pavement markings, including **flexible temporary pavement markers (FTPMs)** used in substitution of temporary construction pavement markings, will be measured and paid for at the contract unit price per linear foot for the appropriate pavement line marking pay items and pay units specified in the Contract. Where FTPMs are used to simulate skip-line and solid-line centerline markings and skip-line and solid-line lane-division markings, the linear foot pay unit shall represent all FTPMs required in accordance **TYPICAL PLAN FOR FTPM PLACEMENT** and the requirements herein to simulate that solid or skip line temporary construction line marking. This cost shall include furnishing and application of the temporary construction pavement markings or FTPMs, surface preparation, furnishing, installing and maintaining temporary construction pavement markings (or FTPMs) for the entire 14 calendar day time limit.

Please note: Quantities for temporary construction markings listed in the contract are based on one cycle of marking for the 14 day time limitation before permanent markings must be installed. If temporary markings require refreshing or reapplication before the expiration of the 14 day time limit for the application of permanent markings, refreshing or reapplication shall be at the Contractor's expense. Such prices shall also include quality control daily logs, traffic control and all materials, labor, equipment and incidentals.

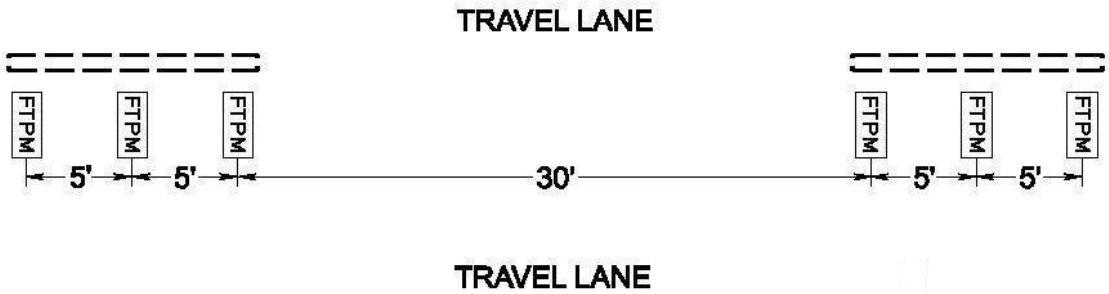
Payment will be made under:

Pay Item	**Pay Unit**
Temporary construction pavement markings and (FTPMs)	Linear Foot
Temporary construction pavement markings	Square Foot

TYPICAL PLAN FOR FTPM PLACEMENT



SIMULATING A SOLID CENTER LINE - NO PASSING ZONE
PLAN 1



SIMULATING A BROKEN LINE (40' CYCLE)
TWO LANE ROADWAY - TWO-WAY FTPM
MULTI LANE ROADWAY - ONE-WAY FTPM
PLAN 2

S704GM2-1211

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
REPLACEMENT OF PAVEMENT LINE MARKINGS, PAVEMENT MARKERS AND LOOP DETECTORS

September 27, 2011

Certain plant mix line items will be designated to have traffic engineering items (pavement markings, pavement markers and loop detectors) replaced under this contract. Replacement of pavement line markings, pavement markers and loop detectors will have the same time limits or restrictions that apply to the plant mix line items and shall be performed in accordance with the following, unless otherwise specified:

1. Pavement Markings shall be installed in accordance with Section 704 of the Specifications, and in accordance with the procedures and within the time limits set forth elsewhere in the Contract.

2. Pavement Markers shall be installed within 30 calendar days after the affected area is resurfaced. Pavement Markers shall not be installed prior to the installation of such pavement markings as centerline and lane-division pavement line markings.

3. Loop Detectors shall be installed in accordance with the requirements of Section 703 of the Specifications.

When replacement of loop detectors is included in the Contract, the Contractor will be required to install new loop detector items within the planed surface prior to the placement of new plant mix or new loop detector items may be installed through the finished riding surface.

Loop detectors installed prior to overlay operations shall be installed 3 inches below the planed surface. Loop detectors installed after the final overlay shall be installed no more than 4.5 inches and no less than 4 inches below the top elevation of the final riding surface.

Loops shall be installed with loop detector cable enclosed in tubing (IMSA 51-5). Loop cable and loop sealant shall be from the Virginia DOT Pre-approved Traffic Control Device Listing. Link: http://www.vdot.virginia.gov/business/resources/APPROVED_product_LISTING.pdf

New loop detectors shall be of the same size, configuration and locations as existing loop detector(s) unless otherwise indicated.

When an existing loop detector is taken “out of service” as a result of the Contractor’s planing operation the Contractor shall have the new loop detector items installed and operational within 96 hours of the “out of service” time and date, unless otherwise stated in the Contract. In no case shall any loop detector be “out of service” for more than 96 hours. If the Contractor chooses to install new loop detector items through the final riding surface, all loop detector items shall be installed and operational within 96 hours after completion of the paving operations in the affected intersection. PLEASE NOTE: Installation of loop detectors shall be performed in the presence of the Engineer.

The Contractor shall notify the Engineer at least 72 hours prior to planing at locations that contain loop detectors.

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
TYPE B, CLASS VI PAVEMENT LINE MARKING TAPE

October 21, 2011

I. DESCRIPTION

This work shall consist of furnishing and installing a profiled (non-flat), permanent, white or yellow preformed pavement line marking tape at locations shown on the plans and as directed by the Engineer.

II. MATERIALS

Marking tape shall be a retro-reflective pliant polymer material consisting of a mixture of polymeric materials, pigments and glass beads (reflective optics) distributed throughout its cross-sectional area with a reflective layer of beads (reflective optics) embedded into the surface. The surface of the tape shall exhibit raised areas resulting in a profiled (non-flat) surface.

The shelf life of the tape for use on facilities constructed or maintained by the Department shall be one year from the date of manufacture when stored in accordance with the manufacturer's requirements.

The marking tape shall not be formulated with any compounds of the heavy metals listed in 40 CFR 261.24 Table 1, except that barium sulfate is allowed. Total heavy metals, with the exception of barium sulfate, shall not exceed 20 times the specified regulatory limits. Materials that must be heated for application shall not exude fumes that are toxic or injurious to persons or property when heated to the application temperature.

The marking tape shall be capable of conforming to pavement contours, breaks and faults through the action of traffic at normal range of pavement temperatures. The marking tape shall be capable of application to new and existing asphalt or hydraulic cement concrete at pavement surface temperatures of 45 to 180 degrees Fahrenheit. Where installed with adhesive, the adhesive shall be per the manufacturer's instructions. The marking tape shall also be capable of being inlaid during installation of the final riding surface during paving operation on new, dense, or open-graded asphalt concrete and shall be ready for traffic immediately after application.

Marking tape shall be weather resistant and after installation shall show no significant tearing, roll back, lifting, shrinkage, or other signs of poor adhesion, nor appreciable bleeding or discoloring (fading), which will impair the intended use of the marking tape throughout its intended service life.

The marking tape shall not deteriorate because of contact with sodium chloride, magnesium chloride, calcium chloride, mild alkalies and acids, or other ice control materials, oils in the pavement material, or oil and gasoline drippings from vehicles.

When the pay item specifies Type B, Class VI Contrast pavement marking tape, the tape shall be an additional 3 inches minimum wider than the width specified in the pay item. This additional tape width shall be black non-reflective with 1 ½ inches minimum on both sides of the white.

A. Initial Approval Requirements:

Marking tape products will be included on the Department's Materials Division Approved Products List after the Department determines conformance to these specifications.

Determination of conformance will include, but will not be limited to, the evaluation of initial and one year test data from AASHTO's National Transportation Product Evaluation Program (NTPEP) on a northern deck or other VDOT approved facilities.

If tested through AASHTO/NTPEP, the marking tape shall have been installed, tested, and met the following requirements on asphalt and concrete surfaces. If tested on another VDOT approved facility, VDOT reserves the right to test and approve tapes based upon in-service performance data on either asphalt or hydraulic cement concrete or both types of concrete surfaces.

AASHTO/NTPEP Testing – Test data values used for approval shall be based upon the data generated per the NTPEP, Pavement Marking Material (PMM) Work Plan.

VDOT Test Facility – Test data values used for approval shall be based upon the data generated by following the testing requirements in Virginia Test Method (VTM)-125 to define the evaluation sections and number of measurements needed. VDOT reserves the right to evaluate durability, skid resistance, and no Track Time based upon field (in-service) performance, VDOT lab testing, or third party testing.

The manufacturer shall certify each batch or lot of material supplied is the same product (binder and reflective optics) that was tested and approved on the NTPEP or VDOT test facility in accordance with the Materials Division, Manual of Instructions for Certification II materials.

1. Retroreflectivity

Tapes shall have the following retroreflectance values after installation when measured in accordance with the requirements of ASTM E 1710. The reflectance values for NTPEP acceptance will be determined from outside of the wheel path. The photometric quantity to be measured shall be Coefficient of Retroreflected Luminance (R_L) and shall be expressed as Millicandelas per square foot per footcandle [$(mcd \cdot ft^{-2}) \cdot fc^{-1}$].

Coefficient of Retroreflected Luminance(R_L) ($mcd \cdot ft^{-2} \cdot fc^{-1}$)		
Color	**New**	**1 Year**
White	500	300
Yellow	300	200

2. Day and Nighttime Color:

Daytime and Nighttime Color including Luminance Factor (Cap Y) shall conform to the requirements of ASTM D 6628 when initially installed and then after 1 year. Color and Luminance Factor values for NTPEP acceptance will be determined from outside of the wheel path. Night color may be measured in accordance with VTM-111 or with portable night color instrumentation per ASTM D 6628.

3. Durability Rating:

No tape line shall be displaced, torn or missing. The tape shall have a durability rating of at least 4 (40% retained) when evaluated in the wheel path area after 1 year when tested in accordance with NTPEP, PMM Work Plan.

4. Skid Resistance:

The surface of the tape shall provide an initial minimum skid resistance value of 45 BPN when tested in accordance with ASTM E 303.

III. INSTALLATION

Marking configurations shall be installed in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices" (MUTCD), the Virginia Supplement to the MUTCD and the Virginia Work Area Protection Manual (latest edition).

Markings shall be installed either under the guidance of the manufacturer's representative or by the manufacturer's certified installer.

Markings to be installed on existing asphalt concrete roadway surfaces or existing and new hydraulic cement concrete surfaces shall be applied in strict accordance with the manufacturer's recommendations for pavement surface preparation and installation techniques for non-embedded surface applications.

Upon delivery of the material to the Contractor, the Contractor shall store all tape in accordance with the manufacturer's requirements until the day of installation, unless otherwise approved. Tape shall not be installed if the material has exceeded its shelf life, has been improperly stored, has deteriorated or is otherwise damaged.

Type B, Class VI markings to be inlaid in new asphalt surfaces shall be installed in accordance with the manufacturer's recommendations for surface preparation and installation techniques. Temperature requirements of the asphalt concrete and the type and size of roller allowed shall be in accordance with the tape manufacturer's recommendations. The Contractor shall maintain the road design cross section unless otherwise modified by the contract requirements and ensure that markings are not degraded by the paving operations.

Markings shall not be installed directly over longitudinal pavement joints or existing markings.

IV. POST-INSTALLATION EVALUATION

Following installation, and prior to final acceptance, a visual evaluation will be made to assess the condition, retroreflectivity, and color of the marking tape. If problem areas are found, an inspection will be made by the Department, the Contractor, and tape manufacturer's representative to identify specific areas of concern. If needed, the suspect areas shall be tested by the Contractor and/or VDOT representative in accordance with VTM-125 to define the evaluation sections and the number of measurements needed. Acceptable test result shall meet the requirements for reflectivity and color specified in Section II, Initial Approval Requirements. Those markings found to be less than the values listed in Initial Approval Requirements for Retroreflectivity and Day and Nighttime Color (1 Year) shall be eradicated and replaced by the Manufacturer at no cost to the Department. Tape that exhibits signs of significant tearing, roll back, lifting, shrinkage, or other signs of poor adhesion will be replaced by the Contractor at no cost to the Department. All costs associated with testing the marking tape for retroreflectivity, color, and adhesion, including the cost of maintenance of traffic, shall be borne by the Contractor.

V. WARRANTY

The pavement marking tape shall be warranted against failure resulting from material defects regardless of method of manufacturer's prescribed application or pavement type. The material shall be warranted to retain its color, retroreflectivity, adherence to the pavement and shall be free of other obvious defects or failures. All pavement marking tape that has failed to meet the warranty conditions shall be replaced with no additional payment.

The warranty shall cover all pavement striping materials (regardless of method of installation), labor, equipment, mobilization\demobilization, tools, incidentals required to remove (eradicate) and replace the pavement striping including maintenance of traffic during the removal and reinstallation operations.

Material guarantees that are given by the manufacturer shall be obtained by the Contractor and assigned to the Commonwealth in writing prior to final acceptance.

A. Retroreflectivity

White and Yellow longitudinal pavement marking tape shall remain effective for its intended use under normal traffic conditions and meet the minimum Coefficient of Retroreflected Luminance (R_L) of 100 millicandelas per square foot per footcandle [$(mcd \cdot ft^{-2}) \cdot fc^{-1}$] when measured in accordance with the requirements of ASTM E 1710 for the following duration:

Longitudinal Marking Tape Retroreflective Warranty Period

New Asphalt Concrete Pavement (Inlay)	6 Years
Existing Asphalt Concrete Pavement (Overlay)	6 Years
Portland Cement Concrete (PCC) Surfaces	6 Years

B. Color

Longitudinal pavement marking tape shall remain effective for its intended use under normal traffic conditions and meet the minimum Daytime and Nighttime color including Luminance Factor (Cap Y) per ASTM D 6628 for the following duration:

Longitudinal Marking Tape Color Warranty Period

New Asphalt Concrete Pavement (Inlay)	4 Years
Existing Asphalt Concrete Pavement (Overlay)	4 Years
Portland Cement Concrete (PCC) Pavement Surfaces	4 Years

C. Material Loss

Solid Longitudinal Line – more than five percent of the substrate is exposed in any 2000 ft section of pavement marking or 50 ft or more of continuous loss.

Broken Line – more than five percent of the substrate is exposed in any 2000 ft section of pavement marking or the loss of two consecutive skips.

VI. MEASUREMENT AND PAYMENT

Type B, Class VI pavement line marking tape will be measured in linear feet for the width specified and will be paid for at the contract unit price per linear foot, which price shall be full compensation for furnishing and installing pavement line markings, surface preparation, and testing and warranty.

Payment will be made under:

Pay Item	Pay Unit
Type B, Class VI pavement line marking (Width)	Linear foot
Type B, Class VI contrast pavement line marking (Width)	Linear foot

VIRGINIA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION FOR
TYPE B, CLASS VII POLYUREA PAVEMENT MARKINGS

October 17, 2011

I. Description

This work shall consist of furnishing and installing white and/or yellow polyurea pavement line markings at locations shown on the plans and as directed by the Engineer.

II. Materials

Polyurea pavement line markings shall be a retro-reflective polymer material consisting of a mixture of polymeric materials, pigments and glass beads and/or reflective optics.

The polyurea material shall not be formulated with any compounds of the heavy metals listed in 40 CFR 261.24 Table 1 except that barium sulfate is allowed. Total heavy metals, with the exception of barium sulfate, shall not exceed 20 times the specified regulatory limits.

The polyurea coating shall be formed by the reaction of at least two components (Part A and Part B). The components shall be formulated such that the proper cure occurs when they are mixed at the times of the application.

The polyurea material shall be capable of application on new and existing asphalt and hydraulic cement concrete surfaces at pavement surface temperatures of 40 degrees Fahrenheit and above. The polyurea material shall maintain its original dimensions and placement without chipping, spalling, shrinking, cracking, bleeding or discoloring (fading) or other signs of poor performance which will impair the intended use of the marking throughout its intended service life.

The polyurea material shall not deteriorate due to contact with sodium chloride, magnesium chloride, calcium chloride, mild alkalies and acids, or other ice control materials, oil in the pavement material, or oil and gasoline drippings from vehicles.

Materials that must be heated for application shall not exude fumes that are toxic or injurious to persons or property when heated to the application temperature.

A. Initial Approval Requirements:

Specific Polyurea pavement markings will be included on the Department's Materials Approved Products List # 74 after the Department determines conformance to these specifications. Determination of conformance will include, but will not be limited to, the evaluation of test data from AASHTO's National Transportation Product Evaluation Program (NTPEP) on a Northern region test deck or other VDOT approved facilities.

If tested through AASHTO/NTPEP, the polyurea material shall have been installed, tested, and met the following requirements on both asphalt and concrete surfaces. If tested on another VDOT approved facility, VDOT reserves the right to test and approve based upon in service performance data on either asphalt, hydraulic cement concrete, or both surfaces.

AASHTO/NTPEP Testing - Test data values used for approval shall be based upon the data generated per the NTPEP, Pavement Marking Material (PMM) Work Plan.

VDOT Test Facility – Test data values used for approval shall be based upon the data generated by following: Virginia Test Method (VTM)-125 to define the evaluation sections and number of measurements needed, evaluation of Durability, and No Track Time based upon field performance, VDOT lab testing or third party testing for compliance.

The manufacturer shall certify each batch or lot of material supplied is the same product (binder and reflective optics) that was tested and approved on the NTPEP or VDOT test facility in accordance with the Materials Division, Manual of Instructions for Certification II materials.

1. Retroreflectivity:

Markings shall have the following retroreflectance values when measured in accordance with the requirements of ASTM E 1710 (outside of the wheel path). The photometric quantity to be measured shall be Coefficient of Retroreflected Luminance (R_L) and shall be expressed as millicandelas per square foot per foot-candle [$(mcd \cdot ft^{-2}) \cdot fc^{-1}$].

Coefficient of Retroreflected Luminance (R_L) ($mcd \cdot ft^{-2} \cdot fc^{-1}$)		
Color	**New***	**1 Year In-Service**
White	400	300
Yellow	300	200

* New Coefficient of Retroreflected Luminance value may be either the 0 or the 1 month reading, whichever is higher.

2. Day and Nighttime Color:

Daytime and Nighttime color including Luminance Factor (Cap Y) shall conform to the requirements of ASTM D 6628 initially and after 1 year. Color and Luminance Factor values for NTPEP acceptance will be from outside of the wheel path. Night color may be measured in accordance with VTM-111 or with portable night color instrumentation per ASTM D 6628.

3. Durability Rating:

The marking shall have a durability rating of at least 4 (40% retained) when determined in the wheel path area after 1 year when tested in accordance with NTPEP guidelines.

4. No Track Time:

When applied in accordance with manufacturer's instructions at 20 +/- 1 mils wet film thickness with reflective optics, the polyurea shall exhibit a no-track time of 10 minutes maximum when tested in accordance with ASTM D711.

III. INSTALLATION:

Marking configurations shall be in accordance with the latest edition of the "Manual on Uniform Traffic Control Devices". Markings shall be applied in strict accordance with the manufacturer's recommendations either under the guidance of the manufacturer's representative or by the manufacturer's certified installer. Markings shall not be installed directly over longitudinal pavement joints.

IV. POST-INSTALLATION EVALUATION

Following installation and prior to final acceptance, a visual evaluation will be made by the Engineer to assess the condition, retroreflectivity and color of the polyurea marking material. If problems areas are found, an inspection will be made by the Department, the Contractor, and the polyurea manufacturer's representative to identify the specific areas of concern. If needed, the suspect areas shall be tested by the Contractor and/or VDOT representative in accordance with VTM-125 to define the evaluation sections and number of measurements needed. Acceptable test results shall meet the requirements for retroreflectivity and color specified in Section II, A – Initial Approval Requirements. Those markings found to be less than the values listed in Initial Approval Requirements for Retroreflectivity and Day and Nighttime Color (1 Year, In-Service) shall be eradicated and replaced by the Contractor at no cost to the Department. All costs associated with testing the pavement marking for retroreflectivity,color, and adhesion, including the cost of maintenance of traffic, shall be borne by the Contractor.

VI. MEASUREMENT AND PAYMENT

Type B, Class VII, Polyurea pavement line marking will be measured in linear feet for the width specified and will be paid for at the contract unit price per linear foot, which price shall be full compensation for furnishing and installing pavement line markings, surface preparation, and testing.

Payment will be made under:

Pay Item	Pay Unit
Type B, Class VII Polyurea pavement line marking	Linear foot

END OF VOLUME 2 OF 2

STANDARD PROVISIONS:

2013 PLANT MIX SCHEDULES