Wisconsin Department of Transportation

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To: WisDOT Staff, Eligible Engineering Consulting Firms, and Prequalified Contractors

Subject: **Interim Supplemental Specification No. 1 amending the 1996 Standard Specifications for Highway and Structure Construction and the 1997 Supplemental Specifications**

From: Jerry Zogg - Chief Standards Development Engineer
Bureau of Highway Construction

Interim Supplemental Specification No. 1 has been approved by the Federal Highway Administration and will become effective with the June 1998 letting and thereafter until superseded. Enclosed are complementary copies of this document for your use; you may produce additional copies as needed.

Prequalified contractors will be responsible for producing sufficient copies of this document for their bidding and contract management purposes. They also will be responsible for notifying their subcontractors and suppliers about this document.

Eligible engineering consulting firms will be responsible for producing sufficient copies of this document to enable their personnel to fulfill their responsibilities under a contract with the Department for engineering services.

Interim Supplemental Specification No. 1 contains revisions to the 1996 Standard Specifications and the 1997 Supplemental Specifications as set forth below:

1. **Subsection 107.22 Contractor's Responsibility for Utility Property and Services.** Paragraph four is revised to clarify that utility facilities or appurtenances may be identified in special provisions as well as in the plans.

2. **Subsection 201.3.1 Forty Meter Unit.** This subsection has been revised to clarify that it is Department policy to pay for clearing and grubbing by the 40 meter unit as surveyed

along the centerline or reference line and that any unit that meets the threshold requirements will be paid for as a full unit. Language has also been added to precisely define the lateral extent of units defined for divided highways.

3. **Subsection 402.4.1 General.** The typical application rate for diluted asphaltic material used as a tack coat is added to the Standard Specifications. This change will eliminate the need for a contract special provision or plan note unless the tack coat is to be applied at a different rate.

4. **Subsection 410.1 Description.** Ownership of materials not incorporated into the work is clarified. The Department must include contract provisions to retain ownership of salvaged asphaltic material not incorporated in the project if, for example, the intent is to use that material on another project.

5. **Subsection 411.7 Basis of Payment.** Paragraph one of this subsection has been revised to include asphaltic mixture design, when required, in the price of the associated Asphaltic Surface item.

6. **Subsection 415.2.2 Concrete.** High cement content mixes, Grades C, C-S, C-IS, C-FA, and C-IP, are added for concrete pavement. These mixes, previously included by special provision, are intended to help address durability problems experienced in some regions of Northern Wisconsin.

7. **Subsection 415.5.4 Consistency.** The slump requirements for paving concrete are redefined in terms of the placement and consolidation technique: slip-formed, not slip-formed with internal vibration, or not slip-formed with surface vibration. The minimum requirement of 25 mm for slip-formed placement has been eliminated.

8. **Subsection 416.2.1 Pavement Terminal Units.** High cement content mixes, Grades C, C-S, C-IS, C-FA, and C-IP, are added for pavement terminal units. These mixes, previously included by special provision, are intended to help address durability problems experienced in some regions of Northern Wisconsin.

9. **Subsection 501.3.7 Fly Ash.** Paragraph three is revised to allow a reduction in fly ash testing frequency when the material has been consistently within the uniformity and specification limits. The manufacturer must provide a statistical analysis that indicates no significant probability of exceeding uniformity or specification limits when frequency reduction is requested.

10. **Subsection 501.4.3 Grades of Concrete.** Restrictions on the grades of concrete to be used when the coarse aggregates are primarily igneous or metamorphic have been incorporated into the standard specifications. These restrictions were previously defined in a special provision for concrete pavements designed to address durability problems experienced in some regions of Northern Wisconsin.

11. **Subsection 502.3.9 Curing.** This revision is a return to the 1989 Standard Specification language which had no restriction on the use of poly-coated burlap. Contractors have had difficulty keeping the burlap wet on vertical surfaces and keeping material in contact with the outside face of a parapet.

12. **Subsection 502.3.12 Name Plates.** Paragraph three has been revised to allow for attachment of name plates with epoxy as shown in the corresponding new Standard Detail Drawing, SDD 12A3-5.

13. **Subsection 502.5.1 Description.** Paragraph two is revised to clarify that this provision applies to deformed reinforcing bars used as anchors and not to smooth dowel bars.

14. **Subsection 505.2.6.1 Dowel Bars.** The specific requirement for lubrication of the dowel bars with SAE 30 oil is generalized to allow the use of manufacturer applied coatings, sprayed-on form oil, or another appropriate treatment.

15. **Subsection 506.2.6.2 Preformed Fabric, Class A.** This section has been revised to incorporate the most current version of the related Military Standard, MIL-C-882E, for compression testing of preformed pads.

16. **Subsection 506.2.6.3 Non-Laminated Elastomeric.** The hardness requirement for Chloroprene pads has been revised to 60±5 be consistent with the 60 Grade specified. The tensile strength requirement has been updated to agree with the current industry standard defined in AASHTO M 251. The adhesion requirements, that do not apply to non-laminated bearings, have been moved to subsection 506.2.6.4.3 for testing of laminated bearing pads.

17. **Subsection 506.2.6.4.3 Testing.** Adhesion testing is moved from subsection 506.2.6.3 on non-laminated elastomeric bearings to this subsection on laminated elastomeric bearings because adhesion testing is only required for laminated pads.

18. **Subsections 520.6, 521.6, 522.6, 523.6, 524.6, 525.6, 528.6, 529.6 and 530.6 Basis of Payment** are revised to codify the Department's current practice of considering any costs associated with dewatering of the excavation as incidental to the related culvert item.

19. **Subsections 601.2, 602.2, and 603.2 Materials** are revised to allow high cement content mixes, Grades C, C-S, C-IS, C-FA, and C-IP, for concrete curb and gutter, sidewalks, loading zones, safety islands, steps and barrier. These mixes, previously included by special provision, are intended to help address durability problems experienced in some regions of Northern Wisconsin.

20. **Subsection 612.6 Basis of Payment.** An exception is added to clarify the Department's practice of paying for the open graded material required for trench backfill in the edgedrain system for concrete pavements as Crushed Aggregate Base Course, Open Graded, No.1 or No.2. This practice is also defined in the Notes to the Standard Detail Drawings SDD. 8 D 15-2b and SDD. 8 D 15-2c.

21. **Subsection 643.2.8.1 General.** An exception is provided to allow overlays for changing the indicated lane on the lane reduction transition sign. This text is added in addition to the text added in the *Supplemental Specifications - 1997 Edition.*

22. **Subsection 643.3.7 Sign Message Overlays.** An exception is provided to allow overlays for changing the indicated lane on the lane reduction transition sign.

23. **Subsection 646.4.2 Applying Painted Markings.** This subsection has been revised to incorporate Standard Special Provision 646-001M into the Standard Specifications.

24. **Subsection 649.2.3 Reflectorized Paint.** This subsection has been revised to incorporate Standard Special Provision 649-001M into the Standard Specifications.

25. **Subsection 649.4 Construction Methods.** The revised language assures that the contractor references and accurately marks no-passing zones for resurfacing projects that require temporary no-passing zones as described in General Note 2. of SDD. 15 C 8-7a, "Pavement Marking".

For your information, the following specifications have been issued:

	Effective From Letting	to Letting
1996 Standard Specifications	Oct. 1996	Until Superseded
1997 Supplemental Specifications	Oct. 1997	Oct. 1998
Interim Supplemental Specifications No. 1	June 1998	Until Superseded

Prepared By: Michael Hall - Standard Specifications Engineer
Bureau of Highway Construction

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1997 SUPPLEMENTAL SPECIFICATIONS
INTERIM SUPPLEMENTAL SPECIFICATION NO. 1

Interim Supplemental Specifications amend the provisions of the 1996 Standard Specifications or the 1997 Supplemental Specifications and shall be considered to be a part of those Supplemental Specifications, superseding any conflicting provisions in the 1997 Supplemental Specifications applicable to work under the contract.

107.22 Contractor's Responsibility for Utility Property and Services. Paragraph four is revised as follows:

If utility facilities or appurtenances not identified in the contract are found, the engineer will determine whether adjustment or relocation of the utility is necessary to accommodate contract work. Arrangements will be made by the engineer with the utility or the contractor for adjustment or relocation deemed necessary by the engineer. Such work done by the contractor will be compensated as provided in Subsection 104.5.

201.3.1 Forty Meter Unit. The entire text is removed and replaced as follows**:**

When so provided, the quantity of clearing or of grubbing will be measured by the full 40 m survey unit along the roadway centerline or reference line. When two or more roadways occur, the quantity of clearing or of grubbing will be measured by the full 40 m survey unit along the centerline or reference line of each roadway. For divided highways, units for each roadway will extend, in width, from 1.5 m outside the grading limit of that roadway to a line mid-way between the reference lines or centerlines for each roadway.

Only 40 m survey units within which it is necessary to remove at least four trees or stumps 75 mm or over in diameter, or any tree or stump or combination of trees or stumps 75 mm or over in diameter whose diameter or total diameters equal or exceed 300 mm will be included for payment. Measurements for diameter will be made as specified in Subsection 201.3.2.

All units included for payment will be paid for as full units.

402.4.1 General. Paragraph three is revised as follows:

The existing surface designated for tack coat treatment shall receive a coat of asphaltic material of the type and grade specified in the contract. The diluted tack coat material shall be applied at an estimated rate of $1L/10m^2$ of surface area unless otherwise specified in the contract. Daily application shall be limited to approximately that area of surface reasonably expected to be paved during the same day.

410.1 Description. The following is added as paragraph 3.

Unless otherwise required in the contract, all salvaged asphaltic pavement material not incorporated in the work shall become the property of the contractor.

411.7 Basis of Payment. Paragraph one is revised as follows:

The items of Asphaltic Surface; Asphaltic Surface, Detours; Asphaltic Surface, Patching; Asphaltic Surface, Safety Islands; and Asphaltic Surface, Driveways and Field Entrances, measured as provided above, will be paid for at the contract unit price per megagram, which price shall be full

compensation for providing an asphaltic mixture design, when required; for furnishing, preparing, hauling, mixing and placing of all materials, including asphaltic material and any salvaged or reclaimed asphaltic pavement materials; for compacting the mixture; for preparing the foundation; and for all labor, tools, equipment and incidentals necessary to complete the work.

415.2.2 Concrete. Paragraph two is revised as follows:

This work shall be constructed with Grade A, A2, A3, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP Air-Entrained Concrete, as specified under section 501, except as otherwise provided for Special High Early Strength Concrete Pavement Repair in Subsection 416.2.5 and for Concrete Pavement Repair in Subsection 416.2.4.

415.5.4 Consistency. The entire text is removed and replaced with the following:

A uniform consistency shall be continuously maintained in consecutive batches of concrete. Slump tests of concrete will be made in accordance with AASHTO T 119. Slump for various techniques shall be as follows:

Slip-Formed	Not Slip-Formed with Internal Vibration	Not Slip-Formed with Surface Vibration
65 mm or less	25 to 75 mm	38 to 75 mm

416.2.1 Pavement Terminal Units. Paragraph one is revised as follows:

Concrete masonry used in the work shall conform to the requirements for concrete masonry Grade A, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified under Section 501. Reinforcement steel shall conform to the requirements of Section 505.

501.3.7 Fly Ash. Paragraph three is revised as follows:

The contractor shall have the fly ash tested by a recognized laboratory as defined in Subsection 501.3.3, 30 days prior to the proposed use of the fly ash and every 30 days during the progress of the work. The manufacturer shall have daily uniformity tests conducted on the fly ash. These daily uniformity tests shall consist of a determination of the specific gravity, percent retained on the 45 mm sieve, loss on ignition, moisture content, sulfur trioxide content, and air content of the mortar. The Department may reduce the required frequency of the uniformity testing for specific tests on specific fly ash sources when statistical analysis of current data shows no significant probability of exceeding uniformity or specification limits.

501.4.3 Grades of Concrete. The entire text is removed and replaced by the following:

501.4.3.1 General Requirements. The grade of concrete to be used for the different items of work, except as provided for prestressed concrete members in Section 503 and for Special High Early Strength Concrete Pavement Repair in Subsection 416.2.5, or as otherwise specifically provided in the contract, shall be in accordance with the following subsections.

When a specific grade of concrete has been selected and used for an item of work, the selected grade shall be used throughout the entire construction of the item, except as specifically set forth in the grade descriptions.

501.4.3.2 Special Restrictions. When the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials the allowable grades of concrete for concrete pavement, approach slabs, barrier walls, surface drains, driveways, alleys, sidewalks, and curb and gutter shall be limited to:

Grade A: When Type II Portland cement is used.

Grade A-FA: When Type II Portland cement is used. Grade A-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade A-FA concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade A concrete shall be used for any work to be constructed during periods in which the use of Grade A-FA concrete is restricted.

Grade A-S: The uses and restrictions for Grade A-FA concrete shall apply.

Grade C: When Types I or III Portland cement are used.

Grade C-FA: When Types I or III Portland cement are used. Grade C-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade C-FA concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade C concrete shall be used for any work to be constructed during periods in which the use of Grade C-FA concrete is restricted.

Grade C-S, C-IS and C-IP: The uses and restrictions for Grade C-FA concrete shall apply.

501.4.3.3 General Use. For all concrete not included under Section 501.4.3.2, the grades of concrete for the different items of work shall be:

Grade A: For Concrete Pavement, Concrete Masonry in structures and miscellaneous construction except as specifically delineated for other grades.

Grade A2: For Concrete Pavement, Curb, Gutter, Curb and Gutter, Barrier Wall or Sidewalk when these items are placed by a slip-formed process.

Grade A3: For Concrete Pavement and miscellaneous construction on low volume State Trunk Highways and other roads under municipal or local jurisdiction in areas where a proven performance record exists for similar mixes. The use shall be restricted to locations and applications specifically delineated in the contract plans or special provisions.

Grade A-FA: For Concrete Pavement, Concrete Masonry in structures and miscellaneous construction, except as specifically delineated for other grades. Grade A-FA concrete shall not be placed on or south of State Trunk Highway 29 prior to May 1 except when permitted by the engineer, nor after October 1. Grade A-FA concrete shall not be placed north of State Trunk Highway 29 prior to May 15 except when permitted by the engineer, nor after September 15. Grade A concrete shall be used for any work to be constructed during periods in which the use of Grade A-FA concrete is restricted.

Grade A-S, A-IS and A-IP: The uses and restrictions for Grade A-FA concrete shall apply.

Grade B: For Concrete Base Course.

Grade B-FA: For Concrete Base Course. Grade B-FA concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade B concrete shall be used for any work to be constructed during this restricted period.

Grade B-S,B-IS and B-IP: The uses and restrictions for Grade B-FA concrete shall apply.

Grade C: For concrete pavement repair and other uses when required by the plans or special provisions.

Grade C-FA: For concrete pavement repair and other uses when required by the plans or special provisions. Grade C-FA concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade C concrete shall be used for any work constructed during this restricted period.

Grade C-S, C-IS and C-IP: The uses and restrictions for Grade C-FA concrete shall apply.

Grade D: For Concrete Masonry in decks, curbs, railings, parapets, medians and sidewalks of structures; and for Concrete Masonry, Seal modified as provided in Subsection 502.3.6.3.

Grade D-FA: For Concrete Masonry in decks, curbs, railings, parapets, medians and sidewalks of structures; and for Concrete Masonry, Seal modified as provided in Subsection 502.3.6.3. Grade D-FA Concrete shall not be placed prior to May 15 except when permitted by the engineer, nor after September 15. Grade D concrete shall be used for any work to be constructed during this restricted period.

Grade D-S, D-IS and D-IP: The uses and restrictions for Grade D-FA concrete shall apply.

Grade E: For Concrete Masonry overlays and repairs on decks of structures and approaches, when required by special provision.

502.3.9 Curing. Paragraphs fifteen and sixteen are revised as follows:

Concrete Masonry in the inside faces of railings and parapets shall be cured by covering with wetted burlap immediately after the forms are removed and the required surface finish is applied and keeping such covering thoroughly wet for a period of at least four days; or by covering for a like period with thoroughly wetted polyethylene-coated burlap meeting the requirements of Subsection 415.2.5.5. Coverings shall be satisfactorily secured along all edges to prevent loss of moisture.

Concrete Masonry in the outside faces of railings, parapets, exterior girders and similar parts of the structure shall be cured by applying membrane curing material immediately after the forms are removed and the required surface finish is applied; or by covering with wetted burlap immediately after the forms are removed and the required surface finish is applied and keeping such covering thoroughly wet for a period of at least four days; or by covering for a like period with thoroughly wetted polyethylene-coated burlap meeting the requirements of Subsection 415.2.5.5. Coverings shall be satisfactorily secured along all edges to prevent loss of moisture.

502.3.12 Name Plates. Paragraph three is revised as follows:

Each plate shall be rigidly attached to concrete structures by means of two lugs at least 75 mm long cast integral with the plate. The plate lugs shall be imbedded or epoxied in the concrete with the outer face of the border flush with the face of the concrete.

502.5.1 Description. Paragraph two is revised as follows:

Concrete Masonry Anchors, Type L shall consist of drilling holes and furnishing and placing epoxy resin cartridges, and placing reinforcing bar anchors of the length and bar size shown on the plan.

505.2.6.1 Dowel Bars. Paragraph one is revised as follows:

Dowel bars shall be plain, round, smooth, coated bars, free from burrs or other deformations detrimental to free movement of the bar in the concrete; shall have at least one end sawed; and shall be of the size and length shown on the plans. Dowel bars shall conform to AASHTO M 31M, Grade 300 or 400. Bend tests will not be required. The coating shall be a thermosetting epoxy and conform to AASHTO M 254, Type B. A surface treatment capable of preventing bond between the bar and the concrete shall be applied to the epoxy-coated bars. Manufacturer applied treatments meeting the above criteria will be allowed. Field surface treatments shall be applied when the bars are placed in the magazine of a dowel bar inserter or after the dowel assembly has been fastened to the base course.

506.2.6.2. Preformed Fabric, Class A. The entire text is removed and replaced with the following:

This material shall consist of preformed fabric pads composed of multiple layers of 227 g cotton duck impregnated and bound with high-quality natural rubber or of equivalent and equally suitable materials compressed into resilient pads of uniform thickness. The number of plies shall be such as to produce the specified thickness after compression and vulcanizing. The finished pads shall withstand compression loads perpendicular to the plane of the laminations of not less than 69 MPa without detrimental extrusion or reduction in thickness, under testing conducted in accordance with MIL-C-882E procedures.

506.2.6.3. Non-Laminated Elastomeric. Paragraph two and the entire table of required physical properties are removed and replaced with the following:

The pads shall conform to the following physical properties:

	Natural Rubber	*Chloroprene*
Grade (Durometer)	60	60
Physical Properties		
Hardness (ASTM D 2240)	60±5	60±5
Tensile strength, kPa (ASTM D 412)	15 500	15 500
Ultimate elongation, min. percent	400	350
Heat Resistance, 70 hrs. at 70 C (ASTM D 573)		
Hardness, max. points change	+10	+15
Tensile strength, max. percent change	-25	-15
Ultimate elongation, max. percent change	-25	-40
Compression Set (ASTM D 395, Method B)		
22 hrs. at 70 C max. percent	25	--

22 hrs. at 100 C max. percent	--	35
Ozone (ASTM D 1149), 20 percent strain		
38±1 C, mounting procedure		
ASTM D 518, Method A		
25 pphm ozone in air by volume,		
48 hrs.	No cracks	--
100 pphm ozone in air by volume,		
100 hrs.	--	No cracks

506.2.6.4.3 Testing. Paragraph two is revised as follows:

The pads shall conform to the following physical properties:

	Natural Rubber	*Chloroprene*
Adhesion Test		
Bond made during vulcanization, (ASTM D 429, Method B)	18 kg/25 mm	18 kg/25 mm
Low Temperature Test		
Brittleness at -40 C (ASTM D746, Procedure B)	No Failure	No Failure

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520.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Culvert Pipe, (Class), Pipe Cattle Pass, or Temporary Culvert Pipe as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe, including bands, geotextile joint wrap when required, and joint tie when required; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

521.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Corrugated Steel Culvert Pipe, Corrugated Steel Pipe Arch or Corrugated Steel Pipe Cattle Pass, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands and concrete walkway for pipe cattle pass; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for

granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

522.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of reinforced concrete pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Reinforced Concrete Culvert Pipe (Class) or Reinforced Concrete Pipe Cattle Pass, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe, including concrete walkway for pipe cattle pass, geotextile joint wrap, and joint ties when required; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for items of work involved.

523.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of reinforced concrete horizontal elliptical pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Reinforced Concrete Horizontal Elliptical Culvert Pipe (Class) which price shall be payment in full for furnishing, hauling and placing the pipe, geotextile joint wrapping, and joint ties when required; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

524.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of salvaged pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the specified size for Salvaged Culvert Pipe, Salvaged Corrugated Steel Pipe Arch or Salvaged Pipe Cattle Pass, as the case may be, which price shall be payment in full for excavating and removing pipe from existing location, cleaning and transporting; for all excavation, including foundation or bed and any associated dewatering; for placing pipe, including the furnishing of any necessary new bands; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; for furnishing and placing geotextile joint wrap when required and joint ties when required and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

525.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of corrugated aluminum pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the size specified for Corrugated Aluminum Culvert Pipe which price shall be payment in full for furnishing, hauling and placing the pipe, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone masonry headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

528.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of polymer coated corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes specified under the contract for Polymer Coated Corrugated Steel Culvert Pipe or Polymer Coated Corrugated Steel Pipe Arch, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

529.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of aluminum coated corrugated steel pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes of pipe specified under the contract for Aluminum Coated Corrugated Steel Culvert Pipe or Aluminum Coated Corrugated Steel Pipe Arch, as the case may be, which price shall be payment in full for furnishing, hauling and placing the pipe or pipe arch, including bands; for all excavation, including foundation or bed and any associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

530.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of corrugated polyethylene pipe culverts, measured as provided above, will be paid for at the contract unit price per meter of the various sizes specified under the contract for Corrugated Polyethylene Culvert Pipe, which price shall be payment in full for furnishing, hauling and placing the pipe, including bands; for all excavation, including foundation or bed and any

associated dewatering; for furnishing and placing Granular Backfill or graded aggregate for granular foundation or cushion; for backfilling, except as provided below; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. Concrete or stone headwalls will be paid for in accordance with the provisions of the specifications for the items of work involved.

601.2 Materials. The last paragraph is revised as follows:

Concrete masonry used in the work shall be manufactured in accordance with and conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

602.2 Materials. The last paragraph is revised as follows:

Concrete masonry used in the work shall conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

603.2 Materials. Paragraph two is revised as follows:

Concrete masonry used in the work shall conform to the requirements for Concrete Masonry Grade A, A2, A-S, A-IS, A-FA, A-IP, C, C-S, C-IS, C-FA or C-IP as specified in Section 501.

612.6 Basis of Payment. Paragraph one is revised as follows:

The quantity of pipe underdrain, measured as provided above, will be paid for at the contract unit price per meter of each of the various sizes for Pipe Underdrain (Size); Pipe Underdrain, Unperforated (Size); Pipe Underdrain, Wrapped (Size); Pipe Underdrain, Wrapped and Plowed (Size); or Pipe Underdrain, Drain Tile (Size), as the case may be; which price shall be full compensation for furnishing, transporting, handling and placing all materials, including pipe, geotextile wrapping, connections, fittings, rodent screens and caps or plugs; for all excavation, plowing and recompaction, salvage and placement of upper tillable or agricultural soil suitable for supporting vegetation, disposal of surplus material and restoring the site of the work; for all backfill, except as provided below; and for all labor, tools, equipment and incidentals necessary to complete the work. Open-graded material required for trench backfill in the edgedrain system for concrete pavements will be measured and paid for under the separate bid item of Crushed Aggregate Base Course, Open Graded No. 1 or No. 2.

643.2.8.1 General. The last paragraph is revised as follows:

Non-word messages cannot be a sign overlay, except for the Lane Reduction Transition sign, WO4-2.

643.3.7 Sign Message Overlays. The third paragraph is revised as follows:

Non-word messages cannot be a sign overlay, except for the Lane Reduction Transition sign, WO4-2.

646.4.2 Applying Painted Markings. The following is added as paragraph three:

The paint shall be applied according to the manufacturer's recommendation for minimum pavement temperature.

649.2.3 Reflectorized Paint. The entire text is removed and replaced with the following:

The paint shall be commercially available solvent-borne or waterborne paint intended for marking traffic lanes on both concrete and asphaltic highways. The paint shall conform to requirements of Subsections 646.2.1 and 646.2.2. Reflectorization of the paint shall be by means of glass beads. The glass beads shall conform to requirements of Subsection 646.2.3. The color of the paint shall be yellow or white, as required on the plans.

649.4 Construction Methods. The following is added as paragraph ten:

When no passing zone temporary pavement marking is required, the contractor shall be responsible for the referencing of the beginning and end of all existing no-passing zones prior to pavement resurfacing which will cover the pavement markings. The contractor shall be responsible for the accurate re-marking of the required temporary no-passing zones.