

**COMMENTARY on the 2007 STANDARD SPECIFICATIONS
FOR STATE ROAD AND BRIDGE CONSTRUCTION,
Revised 7-26-07**

DIVISION 150-EQUIPMENT

Section 151: Compaction Equipment. This is a rewrite of subsection 151.03 of the 1990 Std Specs.

Eliminated the requirement for a 3-axle tandem steel roller regarding the drum relationships compared to the plane of the tread of the rolls. The "General" requirements of this Section specify that the equipment be of standard manufacture.

Section 152: Hauling and Weighing Equipment. This is a rewrite of subsections 151.04, 151.05, and 151.06 of the 1990 Std Specs. Incorporated portions of 90P-0076-R03.

Information to update the portion on weighing equipment was provided by the Kansas Department of Agriculture.

For calibration of large scales and scales that need certified, contact the Kansas Department of Agriculture and scales are under the Division of Weights and Measures not the Kansas State Board of Agriculture.

Section 153: Mixing Plants for Stabilized Base and Shoulders. This is a rewrite of subsection 151.07 of the 1990 Std Specs.

Section 154: Concrete Pavement and Concrete Structure Equipment. This is a rewrite of subsections 151.08, 151.09, 151.10, 151.11, 151.12, 151.13, 151.14, 151.15, and 151.16 of the 1990 Std Specs.

Section 155: Asphalt Surfacing and Asphalt Pavement Recycling Equipment. This is a rewrite of subsections 151.17, 151.18, 151.19, 151.20, 151.21, 151.22, 151.23, 151.24, 151.25 and 151.28 of the 1990 Std Specs. A new section was added for Cold Recycling Equipment (Lime Slurry) for equipment requirements from 90M-6937. Incorporated Cold Recycling Equipment (Fly Ash) requirements from Section 608 of the 1990 Std Spec.

The description of weighing equipment in hot mix plants is referenced to SECTION 153, Hauling and Weighing Equipment and will be included there. Electronic weighing systems using load cells were added as an acceptable system since they are currently being used throughout the industry on newer plants.

Deleted obsolete Traveling Mixing Plants section and Requirements for Continuous Mix Plants. Added a section on Material Transfer Devices.

Deleted obsolete Stationary Mixing Plants section.

Incorporated 90P-0104-R07.

Incorporated 90P-7234 and 90P-0211-R04.

Section 156: Roadside Improvement Equipment. This is a rewrite of subsection 151.31 of the 1990 Std Specs. Incorporated 90P-0076-R03.

Section 157: Miscellaneous Equipment. This is a rewrite of subsections 151.29 and 151.30 of the 1990 Std Specs. Incorporated 90P-0076-R03.
Added Undersealing information.

DIVISION 150 General Notes:

Subsections 151.01 and 151.02 of the 1990 Std Specs were eliminated. This information is provided in DIVISION 100 of the 2007 Std Specs.

Eliminated sections 151.26 and 151.27 of the 1990 Std Specs since KDOT does not use them any more.

DIVISION 200-EARTHWORK

Section 201: Clearing and Grubbing. This is a rewrite of Section 202 of the 1990 Std Specs.

Eliminated the requirement of the Contractor providing KDOT copies of written agreements (with other parties) for disposal of materials.

Eliminated the bid item for "Large Trees"; this bid item has not used on a project for many years.

Eliminated the requirement for tree wound dressing. This practice is no longer favored by the plant care industry, in fact it may even be detrimental to the tree.

Eliminated the provision that "if this item is not shown as a contract item, it is subsidiary." It is unlikely this item would not be shown as a contract item. If it is inadvertently omitted, we should be willing to pay for it. If this item is not shown as a contract item, it will be added as Extra Work.

Added material requirements for backfill of stump holes.

Section 202: Remove Existing Structures. This is a rewrite of Section 206 of the 1990 Std Specs.

Eliminated the requirement of the Contractor providing KDOT copies of written agreements (with other parties) for disposal of materials.

Eliminated the provision that "if this item is not shown as a contract item, it is subsidiary." It is unlikely this item would not be shown as a contract item. If it is inadvertently omitted, we should be willing to pay for it. If this item is not shown as a contract item, it will be added as Extra Work.

Added bid item and provisions for removing and reconstructing existing structures. This is because some urban projects have monuments or signs to be relocated during construction.

Added material requirements for backfill.

Added the following information:

"If the plans indicate any removal of building structures, Contractor's responsibilities shall include sampling, testing, and removal of asbestos if identified. Contractor shall file all appropriate notification forms and any required permits with Federal and State authorities; to pay

all related fees; and, to comply with all other federal and state regulations, laws, rules, and ordinances pertaining to asbestos removal and waste disposal. Contractor shall furnish the Engineer copies of all notification forms, correspondence, test results, recommendations, and other information to document compliance with these requirements.”

It just needs a section in the “Basis of Payment” that all the necessary works will be paid as “Extra Work”.

Incorporated cut flange deduction from 90P-0291.

Section 203: Reset Existing Culvert. This is a rewrite of Section 208 of the 1990 Std Specs.

Removed the bid item and requirements for resetting reinforced concrete box culverts. It is highly unlikely that this item would be used.

Added provision for replacing existing culverts and end sections the Engineer determines unsuitable for resetting.

Section 204: Excavation and Backfill for Structures. This is a rewrite of Section 207 of the 1990 Std Specs.

Removed the bid item of water for earthwork compaction. The quantity of water used in structure backfill is negligible. Water will be subsidiary, as the compaction is.

Added the excavation requirements for PE and PVC pipes (flexible pipe).

Removed the requirement that the material for foundation stabilization was "measured in vehicle at the time of unloading".

Incorporated Special Provisions 90P-0041-R01 and 90P-0047-R01. Added bid items for Granular Backfill and Granular Backfill (Abutment Drains).

At the request of Bridge Design, added provisions for spread footing bridge foundations to this specification. The provisions address the issue of determination of a sound foundation, and the issue of obtaining a sound foundation in shale.

The Granular Backfill (Abutment Drains) bid item was removed. It has been replaced by Strip Drains.

Incorporated 90P-0210-R03.

Changed the pay limits to all be 2 foot outside the footprint, unless detailed otherwise in the Contract Documents.

There are now 2 bid items: Foundation Stabilization and Foundation Stabilization (Set Price). There may be known quantities on the plans that will use Foundation Stabilization. If there are not known quantities the bid item Foundation Stabilization (Set Price) will be used.

Section 205: Excavation and Embankment for Highways. This is a rewrite of Sections 204, 209, 210, and 212 of the 1990 Std Specs.

Eliminated Type C compaction. This item was rarely used; when used, it was for small irregular areas. Since Type B and Type C are both determined visually, Type C was incorporated into the Type B requirements.

Eliminated the requirement that if the 12 inches directly under existing pavement was too wet to recompact, it would not be classified as unstable material. This requirement forced the bidder to (over)compensate for an unknown when bidding. By removing this requirement, we will classify this material as unstable excavation and pay according if this condition exists.

Defined payments for unstable and unsuitable excavation if the project is bid as "Embankment". Normally, payment for unstable and unsuitable excavation is a function of the bid item "Common Excavation".

At the request of FHWA, defined the classification of shale (rock if it requires blasting or ripping; otherwise, it is common). Also, in the definition of common excavation, added the following: "Depending on the makeup and characteristics of the common excavation, this material may or may not be used for embankments."

Modified the moisture range (earthwork compaction) designations at the request of Materials and Research and the District Construction Engineers. Supposedly this will clarify the designations.

The term "roadbed" was eliminated in favor of the term "embankment." These 2 terms were used interchangeably (probably causing confusion), we chose to use the term "embankment" because it is the more familiar of the two. The definition for "roadbed" was removed from the list of definitions in Section 100.

Incorporated 90P-0194-R04, non-durable shale comments.

Incorporated 90P-0255-R02 and 90P-0256.

Section 206: Select Soil. This is a rewrite of Section 214 of the 1990 Std Specs.

Changed bid items from "Placing Select Soil" to "Select Soil" and from "Selected Embankment Material (Vehicle Measurement)" to "Select Soil (Contractor-Furnished)".

At the request of KDOT field offices and several Contractors, the measurement of Contractor-furnished select soil was changed from vehicle measurement to cross-sections (volume).

Section 207: Overhaul. This is a rewrite of Section 211 of 1990 Std Specs.

Section 208: Linear Grading. This is a rewrite of Section 205 of the 1990 Std Specs.

DIVISION 200 General Notes:

Section 201-Equipment of the 1990 Std Specs was eliminated from the 2007 Std Specs; this material is covered in DIVISION 150 of the 2007 Std Specs.

Section 203-Erosion Control of the 1990 Std Specs was moved to SECTION 901 of the 2007 Std Specs.

Section 213-Shoulders of the 1990 Std Specs is eliminated from the 2007 Std Specs. New earth shoulders are generally included in earthwork balance quantities. Partial shoulders or wedges are covered in other specifications.

Special Provision 90P-0070, Reconditioning Existing Roadbed, was not incorporated into the 2007 Std Specs. This work is essentially subgrade modification, covered in SECTION 301.

The terms "Embankment" and "Roadbed" were used interchangeably in the 1990 Std Specs. For the sake of consistency, we will only use "Embankment" in the 2007 Std Specs (embankment is

the more familiar term). Definitions in DIVISION 100 of the 2007 Std Specs were revised to reflect this change.

DIVISION 300-STABILIZED SUBGRADE, BASE AND SHOULDERS

Section 301: Subgrade Modification. This is a rewrite of Section 302 of the 1990 Std Specs.

Incorporated Section 310 of the 1990 Std Specs (Fly Ash Modified), Special Provision 90P-0164 (Silt Modified), and added In-Place Material Modified Subgrade. Incorporated Cement Modified Subgrade.

Changed fly ash modified subgrade to allow payment of water for cure (as other types of subgrade modification do).

Changes all type of manipulation for subgrade modification to the unit of square yard (as most types already were) and changed bid item names.

The unit of measurement for Aggregates for Subgrade Modification was changed to cubic yard.

Section 302: Lime Treated Subgrade. This is a rewrite of Section 305 of the 1990 Std Specs.

Incorporated 90P-0141-R03.

Section 303: Cement Treated Subgrade. This is a new section based off 90P-0274-R02.

Section 304: Crushed Stone Subgrade. This is a rewrite of Section 306 of the 1990 Std Specs. Added the bid item of water to be consistent with other subgrade specifications.

Changed "Compact the crushed stone subgrade to a uniform density of not less than 90% of the standard density." to "Compact the crushed stone subgrade to a uniform density of not less than 70% of the relative density." The Bureau of Materials and Research developed a test method for relative density.

Section 305: Aggregate Base and Aggregate Shoulders. This is a rewrite of Section 303 of the 1990 Std Specs. The units of measurement for the aggregate base and aggregate shoulders were changed to square yard. This is consistent with other subgrade and base specifications. The title was changed to be more descriptive. Provisions for using auto controlled equipment to trim the finished base were added; this is consistent with other subgrade and base specifications.

Incorporated 90P-0183. Eliminated the reference to Section 836, and incorporated the content from Section 836.

Section 306: Cement Treated Base. This is a rewrite of Section 309 of the 1990 Std Specs. The Section is written including a QC/QA specification. This will afford the Contractor the opportunity to design "his" mix in the most economical manner, with the type of cementing agent he wishes. The designing and quality control responsibilities are very close to the responsibilities already assumed by the Contractors doing QC/QA PCCP.

The unit of measurement was changed from "cement," "water," and "manipulation" to "square yards" of finished base. In the past, if the Contractor wanted to use something other than

the theoretical plan quantity of cementing agent, a new price had to be negotiated. The unit of measurement change (along with the specification rewrite) eliminates the need to negotiate new prices. KDOT is assured of getting the product we want by requiring compressive strength tests.

The title of this Section was changed by omitting the word "Portland." Most Contractors use fly ash or a combination of fly ash and cement; therefore, dropping the "Portland" designation is appropriate.

Added the "exception" for non-QC/QA pavement projects; these are projects with small quantities of pavement and CTB, and it is impractical to require Contractor quality control testing.

Incorporated 90P-0119-R08.

Still need to address the dispute resolution by Special Provision.

Section 307: Granular Base. This is a rewrite of Section 304 of the 1990 Std Specs. This item is used by KDOT as a base, not a subbase; therefore, changed the title to "Base."

DIVISION 300 General Notes:

Section 301, Equipment of the 1990 Std Specs is eliminated from the 2007 Std Specs; this material is covered in DIVISION 150 of the 2007 Std Specs.

Section 307-Light Type Surfacing of the 1990 Std Specs, was moved to SECTION 841 of the 2007 Std Specs.

Section 308-Surfacing for Side Roads and Entrances of the 1990 Std Specs was moved to SECTION 836 of the 2007 Std Specs.

Eliminated shoulder drop off info from each spec and incorporated information in the Work Zone Traffic Control spec in SECTION 805.

Bound Drainable Base for PCCP (90P-0144) will be handled by special provision due to limited use.

DIVISION 400-CONCRETE

Section 401: Concrete. This is a rewrite of Section 402 of the 1990 Std Specs. Incorporated 90P-0156-R09 and the silica fume mix information from 90P-0158-R11.

A section was added to cover the use of ground granulated blast furnace slag. The specified slumps for concrete pavement and structures have been moved into this section from 500 and 700.

The references to lightweight concrete were removed and will be addressed with a special provision if and when the need occurs. Changes were made to Tables 401-2, 401-4, and 401-5 to

reflect lower cement requirements due to changes in the aggregate grading to a more optimized mix than was previously used.

Title of the Section was changed from “Classification and Proportioning” to “Concrete” to be more inclusive.

Created Table 401-8 in section 401.8 a. Eliminated 13th paragraph.

Defined mortar and grout. There seems to be confusion about which term to use where.

DIVISION 400 General Notes:

Section 401-Equipment, of the 1990 Std Specs is eliminated from the 2007 Std Specs. This material is covered in DIVISION 150 of the 2007 Std Specs.

DIVISION 500-RIGID PAVEMENT

Section 501: Portland Cement Concrete Pavement - Quality Control/Quality Assurance. This is a new section based off 90P-0244-R01 and 90P-0054-R01.

Added comment about “early entry” saws may be used based on satisfactory performance and depth of cut recommended by the equipment manufacturer.

Concrete Core (Set Price) is for a single core, not a set of three.

Section 502: Portland Cement Concrete Pavement. This is a rewrite of Section 502 of the 1990 Std Specs. Incorporated 90P-0077-R17 and 90P-0054-R01.

Added comment about “early entry” saws may be used based on satisfactory performance and depth of cut recommended by the equipment manufacturer.

Section 503: Portland Cement Concrete Pavement Smoothness. This is a new section based off 90P-0111-R10 and 90P-0225-R05 Pay tables in 90P-0111-R10 and 90P-0225-R05 were adjusted by $\frac{2}{3}$'s. Increase was based on a price of \$40-\$42/square yard of concrete. Old tables were based off a price of \$15/square yard, which is no longer accurate.

Excluded from profilograph testing, and not eligible for pay adjustments, on all projects are:

Added sideroads less than 250 feet in length to the list.

DIVISION 500 General Notes:

Section 501-Equipment, of the 1990 Std Specs is eliminated from the 2007 Std Specs. This material is covered in DIVISION 150 of the 2007 Std Specs.

DIVISION 600-FLEXIBLE PAVEMENT

Section 601: Asphalt Application Temperatures. This is a rewrite of Section 602 of the 1990 Std Specs.

Section 602: Hot Mix Asphalt Construction - Quality Control/Quality Assurance (QC/QA). This is a new section based off 90P-0272-R06, 90P-0230-R16 and 90M-7203.
Asphalt Core (Set Price) is for a single core not a set of three.

Section 603: Asphalt Pavement Smoothness. This is a new section based of 90P-0039-R10.

Section 604: In-Place Cold Recycled Asphalt Construction. This is a rewrite of Section 608 of the 1990 Std Specs. Incorporated 90P-0208-R06 & 90P-6902.

Section 605: Surface Recycled Asphalt Construction. This is a rewrite of Section 609 of the 1990 Std Specs. Incorporated 90P-0211-R04.

Section 606: Microsurfacing. This is a rewrite of Section 611 of the 1990 Std Specs. Incorporated 90P-0104-R07. Changed title and bid item from Modified Slurry Seal to Microsurfacing.

Section 607: Asphalt Prime Coat. This is a rewrite of Section 612 of the 1990 Std Specs.

Section 608: Asphalt Sealing. This is a rewrite of Section 613 of the 1990 Std Specs.

Section 609: Single Asphalt Surface Treatment. This is a rewrite of Section 614 of the 1990 Std Specs.

Section 610: Double Asphalt Surface Treatment. This is a rewrite of Section 615 of the 1990 Std Specs.

Section 611: Plant Mix Asphalt Construction - Commercial Grade. This is a rewrite of Section 605 of the 1990 Std Specs. Incorporated 90P-0125-R08.

Section 612: Milling. This is a rewrite of Section 616 of the 1990 Std Specs. Incorporated 90P-0087-R01.

DIVISION 600 General Notes:

Section 601-Equipment of the 1990 Std Specs was eliminated from the 2007 Std Specs; this material is covered in DIVISION 150 of the 2007 Std Specs.

Section 603-Plant Mix Bituminous Construction of the 1990 Std Specs was eliminated from the 2007 Std Specs and will be handled by special provision at the request of the Bureau of Materials and Research.

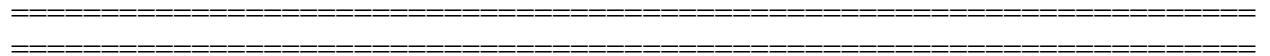
Section 604-Hot Recycled Bituminous Construction of the 1990 Std Specs was eliminated from the 2007 Std Specs because it is no longer used by KDOT.

Section 606-Bituminous Plant Mix-Temporary Surfacing of the 1990 Std Specs, is combined with Section 816-Temporary Surfacing, to create Section 840-Temporary Surfacing in the 2007 Std Specs.

Section 607-Road Mix Bituminous Construction of the 1990 Std Specs was eliminated from the 2007 Std Specs because it is no longer used by KDOT.

Section 610-Slurry Seal of the 1990 Std Specs was eliminated from the 2007 Std Specs because it is no longer used by KDOT.

Changed Plant Mix Bituminous Construction to Hot Mix Asphalt.



DIVISION 700-STRUCTURES

Section 701: Temporary Shoring. This is a new section added based on 90M-6543. This specification needs to be followed any time the Contractor constructs temporary shoring, however, the item will be subsidiary if the temporary shoring was necessitated because of compliance with safety standards or the Contractor's methods of operation.

Incorporated 90P-0258.

Section 702: Corrugated Metal Sheet Piling. This is a rewrite of Section 715 of the 1990 Std Specs.

Section 703: Drilled Shafts. This is a rewrite of Section 706 of the 1990 Std Specs.

Provisions for sonic testing were added at the request of Bridge Design. The bid item for "Rock Cores" was eliminated because of the sonic testing.

Incorporated 90P-0090-R10.

Section 704: Piling. This is a rewrite of Section 704 of the 1990 Std Specs. Incorporated the appropriate portions of 90ERM-1.

Eliminated the provisions for timber piles. We no longer use timber piles on the State System. Any Local Project requirements will require a Project Special Provision.

Eliminated the "generic bid items"; the type of piling is always specified.

At the request of the District Construction Engineers, added provisions that "if no test piles, order length for piles will be plan length" and "stop driving pile (regardless of penetration)

if bearing value reaches 1½ times the specified bearing value" and "no concrete placed in the footing or abutment until all piles in the footing or abutment are driven."

Revised test piling and pile re-strike.

Moved information on pile caps and cushions for pile driving equipment to the Division 150-Equipment.

Section 705: Structural Steel Fabrication. This is a new section based on portions of Section 702 of the 1990 Std Specs. Incorporated 90P-0062-R02 and 90P-0065-R18.

Section 706: Bearing and Pads for Structures. This is a rewrite of Section 708 of the 1990 Std Specs. The term "device" was removed from the spec and bid item, to place the terminology more in line with the AASHTO Bridge Manual.

Incorporated 90P-0050-R04.

Section 707: Finger Plate And Modular Expansion Devices. This new section based on the construction portion of special provision 90P-0030-R3. The redundant references to applying sealant and adhesive according to the manufacturer's recommendations were eliminated.

Bid items were changed.

Section 708: Falsework And Form Construction. This is a new section based on portions of Section 701 of the 1990 Std Specs. Incorporated 90P-0091-R15.

Section 709: Steel Permanent Deck Forms. This is a rewrite of Section 726 of the 1990 Std Specs.

Section 710: Concrete Structure Construction. This is a rewrite of Section 701 of the 1990 Std Specs. Incorporated 90P-0091-R15 in the appropriate areas.

The first subsection of the Construction Requirements (1990) concerning the consistency and slump of the bridge deck concrete was moved to SECTION 401 of the 2007 Std Specs.

Removed the portion on falsework and form construction and created new SECTION 708-Falsework and Form Construction of the 2007 Std Specs.

Tables were created for the minimum curing times and minimum time before removing forms and falsework. The tables will improve the locating and recognition of this info.

The provisions for "alternate drainage structures" was eliminated. These provisions have not been used for many years, and the Bureau of Design reports that it is unlikely that they would be used in the future. Also eliminated the bid item of "Reinforced Concrete Box" which is for alternate drainage structures.

Eliminated the bid items for "early strength concrete" and "lightweight aggregate concrete" - the Bridge Section of the Bureau of Design reports that it is very unlikely we would use these items in the future.

Moved the curing requirements for ditch lining, curb and gutter, and sidewalks to the appropriate Sections in Division 800.

Section 711: Reinforcing Steel. This is a rewrite of Section 703 of the 1990 Std Specs.

Removed section on using Structural Steel for reinforcing.

Incorporated 90P-0165-R07.

Section 712: Structural Steel Construction. This is a rewrite of Section 702 of the 1990 Std Specs, and incorporation of the changes included in the most recent revisions of Special Provisions 90P-0048, 90P-0062-R02 and 90P-0065-R18.

Removed the portion on fabrication and created new SECTION 705-Structural Steel Fabrication of the 2007 Std Specs.

Removed the portion on falsework & form construction and created new SECTION 708-Falsework and Form Construction of the 2007 Std Specs.

Direct Tension Indicators (DTI's) and twist-off caps were added to the high strength bolt tightening procedure. The "turn of nut" method is retained. All connections must be brought to "snug tight" before proceeding, regardless of the method used. Verification of the DTI's in the field is performed by the Contractor and observed by the Engineer.

Changed "Welded Steel Studs" to "Welded Stud Shear Connector".

Section 713: Field Welder Qualification. This was a new section added by the Bureau of Materials and Research.

Section 714: Painting Structural Steel. This is a new section based on portions of Section 702 of the 1990 Std Specs. Incorporated 90P-0065-R18 and 90P-0008-R09. For structural painting, the vinyl topcoat was removed from the spec and replaced with acrylic or polyurethane systems. All other paint systems were removed from the "painting in kind" section, because none are allowed at this time.

A new subsection for painting new weathering steel was also added (info provided by Bridge Design).

Section 715: Prestressed Concrete Members. This is a rewrite of Section 705 in the 1990 Std Specs. Incorporated 90P-0113. The information in the September 6, 1990 Bureau of Materials and Research policy memo, "Inspection of Prestressed Concrete", was inserted in the appropriate places.

Section 716: Post-Tensioning (Haunched Slab Bridge). This is a new section based off Special Provision 90P-0240-R03.

Section 717: Silica Fume. This is a new section based off 90P-0158-R11.

Section 718: Elastomeric Concrete. This is a new section, edited from the construction portion of 90P-0214-R01, which was originally written by Bridge Design.

Section 719: Expansion Joints (Strip Seal Assembly, Preformed Elastomeric Neoprene & Compression and Other). This is a rewrite of Section 727 of the 1990 Std Specs. Incorporated 90P-0053-R01, 90P-0145 and 90P-0146.

The redundant references to applying sealant and adhesive according to the manufacturer's recommendations were eliminated.

Changed items from Joint System...to Expansion Joints (*) after discussions with Bureau of Design.

Section 720: Slipforming Concrete Barrier for Bridges. This is a rewrite of Section 711 of the 1990 Std Specs.

Section 721: Metal Handrail for Bridges and Other Uses. This is a rewrite of Section 709 of the 1990 Std Specs. Incorporated a bid item for miscellaneous handrails (Handrails (*) (**). In the past we have used several Project Specific Special Provisions for miscellaneous handrails (such as handrails on the top of retaining walls). These Project Specific Special Provisions have used the same material, fabrication, and erection requirements as the bridge handrails.

Section 722: Sign Structures and Bridge Mounted Sign Attachments. This is a new section based on Special Provision 90P-0073 rewritten in the imperative mood. Also, requirements for dye penetrant testing of welds were added. Additionally, the cement grout was changed to the grout covered by subsection 1714 of the 2007 Edition of the Standard Specifications.

Incorporated 90P-0031, 90P-0032 and 90P-0073-R01

Section 723: Substructure Waterproofing Membrane. This is a rewrite of Section 728 of the 1990 Std Specs.

Established “square yard” as the unit of measure. Included the straight epoxy system that has been added to the materials specification.

Section 724: Bridge Backwall Protection System. This is a new section based of 90P-0174.

Established “square yard” as the unit of measure. Coal Tar was removed.

Section 725: Abutment Drainage Systems. This is a new section based off 90P-0015 that was developed originally to combat loss of backfill material behind abutments and eliminate staining on the front wall due to seepage of water.

Incorporated 90P-0015-R01.

Section 726: Concrete Masonry Coating. This is a new section based off 90P-209-R01.

Section 727: Repairs (Structure). This is a rewrite of Section 725 of the 1990 Std Specs. Incorporated 90P-0024, 90P-0026-R01 and 90P-0043.

Section 728: Bridge Curb Repair. This new section based off 90P-0028. Added material requirements for curing materials, concrete bonding materials, expansion joint materials, and reinforcing steel.

Section 729: Multi-Layer Polymer Concrete Overlay. This is a new section based off 90M-6749.

Section 730: Epoxy Resin Crack Repair. This is a rewrite of Section 710 of the 1990 Std Specs. Incorporated 90P-4860.

Section 731: Area Prepared for Patching (Existing Concrete Bridge Deck). This is a rewrite of Section 722 of the 1990 Std Specs. Incorporated 90P-0086-R02.

Section 732: Machine Preparation. This is a rewrite of Section 723 of the 1990 Std Specs. Incorporated 90P-0089-R01

Section 733: Hydrodemolition. This is a rewrite of Section 724 of the 1990 Std Specs. Incorporated 90P-0115-R01.

Section 734: Structural Plate Structures. This is a rewrite of Section 714 of the 1990 Std Specs.

Section 735: Precast Reinforced Concrete Box. This is a new section based off 90P-0190-R05.

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DIVISION 700 General Notes:Section 701-Equipment of the 1990 Std Specs was eliminated from the 2007 Std Specs. This material is covered in DIVISION 150 of the 2007 Std Specs.

Section 707-Bridges of the 1990 Std Spec was eliminated from the 2007 Std Specs.

Section 712-Pipe Culverts and End Sections of the 1990 Std Specs was moved to SECTION 817 of the 2007 Std Specs.

Section 716-Encasement Pipe of the 1990 Std Specs was moved to SECTION 818 of the 2007 Std Specs.

Section 717-Concrete (Commercial Grade) of the 1990 Std Spec was eliminated. This Section was never intended to be a bid item, and was not used as a bid item. Commercial Grade Concrete is permitted as an alternate to regular concrete in some situations. Commercial Grade Concrete is covered in SECTION 401-Concerete of the 2007 Std Spec.

Section 720-Bridge Deck Wearing Surface of the 1990 Std Specs was replaced with SECTION 717-Silica Fume Overlay in the 2007 Std Specs.

Section 721-Trap Rock Wearing Surface of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 729: Coal-Tar Membrane Protective Coat of the 1990 Std Spec was eliminated from the 2007 Std Specs.

Reserved Sections 713, 718 and 719 of the 1990 Std Spec were eliminated from the 2007 Std Specs.

State Furnished Structural Steel. New item will be handled by special provision.

High Density Bridge Deck Wearing Surface. New item will be handled by special provision.

DIVISION 800-MISCELLANEOUS CONSTRUCTION

Section 801: Mobilization. This is a rewrite of Section 820 of the 1990 Std Specs. Included 90P-0150.

Section 802: Contractor Construction Staking. This is a rewrite of Section 819 of the 1990 Std Specs. Incorporated 90M-6414 (Right-of-Way Survey Monuments) and 90P-0260-R05. Reverted back to original Construction Staking Payment Schedule in Section 809 of the 1990 Std Specs. The table in 90P-0260-R05 was impractical, especially on multi-phase projects.

Section 803: Field Office and Laboratory. This is a rewrite of Section 805 of the 1990 Std Specs. Incorporated 90P-0203. Removed "Special" from the bid item "Field Office (Special)" because it is not necessary. Eliminated the requirements for the Type D Field Office and Laboratory; this laboratory was used for asphalt extraction testing (that we no longer perform). Eliminated the provision for accepting a "party line" in lieu of a "private" telephone line; private telephone lines (including cellular) are available in every location.

Section 804: Maintenance and Restoration of Haul Roads. This is a rewrite of Section 833 of the 1990 Std Specs. Incorporated 90P-0114. Change bid item from "Restoration and Maintenance" to "Maintenance and Restoration" (this is the actual progression of events).

Section 805: Work Zone Traffic Control. This is a rewrite of Section 821 of the 1990 Std Specs. Changed title from Traffic Control to Work Zone Traffic Control. Changed Bid Items from "Construction Sign..." to "Work Zone Sign..." at the request of the FHWA. Incorporated 90P-0137-R18, 90P-0178 and 90P-0179-R01.

Incorporated information on shoulder drop-off treatment from several sections in Division 300 of the 1990 Std Specs.

Section 806: Durable Pavement Markings. This is a rewrite of Sections 827, 834 and 835 of the 1990 Std Specs. Incorporated 90P-0294.

Section 807: Painted Pavement Markings. This is a new section based off 90P-0084-R06. This specification does not include the observation period, acceptance standards, or warranty requirements found in the Durable Pavement Marking specification.

Section 808: Removal of Existing Pavement Markings. This is a rewrite of Section 822 of the 1990 Std Specs. Clarified that the removal is measured and paid for each line that is removed.

Section 809: Concrete Safety Barrier. This is a rewrite of Section 828 of the 1990 Std Specs. Incorporated 90P-0038 and 90P-0133-R01. Since median filler material is such a small item (only used in median barriers around piers), the bid item was eliminated, making it subsidiary.

Section 810: Inertial Barrier Systems. This is a rewrite of Section 826 of the 1990 Std Specs. Incorporated 90P-0172-R03.

Section 811: Impact Attenuator. This is a new section based off of 90M-7085.

Section 812: Permanent Signing. This is a rewrite of Sections 825 and 829 of the 1990 Std Specs. Changed title from Highway Signing and Delineation. Incorporated 90P-0096-R06.

Section 813: Rumble Strips. This is a new section based off 90P-0259-R02 and 90P-4899.

Section 814: Electric Lighting and Traffic Signals. This is a rewrite of Section 801 of the 1990 Std Specs. Incorporated 90P-0035 and 90P-0176-R02.

Section 815: Catch Basins, Inlets, Outlets, Manholes, Junction Boxes, and Other Existing Structures. This is a rewrite of Section 810 of the 1990 Std Specs.

Section 816: Adjustment of Inlets, Manholes, and Other Existing Structures. This is a rewrite of Section 809 of the 1990 Std Specs.

Section 817: Pipe Culverts, Erosion Pipe, Storm Sewers, Sanitary Sewers & End Sections.

This is a rewrite of Section 712, 802, 813 and 814 of the 1990 Std Specs. Incorporated 90P-0180, 90P-0247.

Changed the designation for polyethylene from "CPP" (corrugated polyethylene pipe) to "PEP" (polyethylene pipe); the new material specification for polyethylene pipe (Section 1900) designates the material as "PE" and allows both corrugated and ribbed pipe. Also added the end section requirements for PEP that is specified in the new material specification. The only types of pipes listed are the ones shown (for CRP and EP) in the new Subsection 1901, Uses of Pipe.

Eliminated the provisions for alternate drainage structures, the Bureau of Design has not used this option for many years and will not use it in the future.

Section 818: Encasement Pipe. This is a rewrite of Section 716 of the 1990 Std Specs.

Section 819: Bored, Jacked or Tunneled Pipe. This is a new section based off 90P-0288 and Specifications from other States as a guide.

Added "Compact the backfill to Type A, MR-5-5, according to **SECTION 205.**"

Section 820: Flume Inlets and Slope Drains. This is a rewrite of subsection 810.08 of the 1990 Std Specs.

Eliminated the option for "AE concrete"; the Standard Plan Sheet specifies that "AE concrete will be used. Added the "Type" designation to the bid items.

Section 821: Flapgates. This is a rewrite of Section 807 of the 1990 Std Specs.

Section 822: Underdrains. This is a rewrite of Section 818 of the 1990 Std Specs.

Section 823: Steel Prefabricated Interception Devices and Steel Slotted Drains. This is a new section based off 90P-0058-R02 and 90P-0059.

Section 824: Concrete Sidewalk, Steps and Ramps. This is a rewrite of Section 815 of the 1990 Std Specs. Incorporated 90P-0278-R03.

Section 825: Curb and Gutter. This is a rewrite of subsection 810.06 of the 1990 Std Specs. Incorporated 90P-0028.

Section 826: Shot-Crete Concrete. This is a new section based off 90P-0067.

At the request of a Contractor in the industry, made the following changes: (1) allow the use of FA-A or FA-M aggregate, previously only FA-A was allowed; (2) eliminated the water/cement ratio; since the water is added (and adjusted to meet existing conditions) at the discharge end of the spray hose, it is next to impossible to measure the ratio. Added the requirement that the water in the mixture is regulated to achieve maximum adhesion and minimum rebound and slumping; (3) added provisions for curing with Type 2 liquid membrane-forming compound if it is impracticable to provide the specified "continuously damp for 4 days".

Section 827: Guardrail and Guideposts. This is a rewrite of Section 808 of the 1990 Std Specs. Incorporated 90P-0223-R01.

As per Warren Sick's memorandum dated August 17, 2004, changed 'guard fence' to 'guardrail'.

Section 828: Fencing. This is a rewrite of Section 806 of the 1990 Std Specs. Incorporated 90P-0139-R01.

Section 829: Riprap. This is a rewrite of Section 803 of the 1990 Std Specs.

Section 830: Slope Protection. This is a rewrite of Section 804 of the 1990 Std Specs. Incorporated 90P-0171-R02. Renamed from Rock Embankment to Slope Protection.

Section 831: Ditch Lining. This is a rewrite of subsection 810.07 of the 1990 Std Specs. Added the bid item and requirements for aggregate ditch lining (previously shown only on a Standard Plan Sheet). Eliminated the bid item for grouted stone backslope ditch lining; the Standard Plan Sheet does not have a detail for this.

Added provisions for fibrous concrete reinforcement in lieu of steel mesh.

Section 832: Gabions. This is a rewrite of Section 836 of the 1990 Std Specs. Many of the instructions in the 1990 Std Specs may or may not be valid, depending on the manufacturer of the baskets. Eliminated the specific instructions, replaced them with the manufacturer's instructions.

Section 833: Pavement Patching. This is a rewrite of Section 812 of the 1990 Std Specs. Changed the bid item for asphalt pavement patching to the unit of square yard (as concrete pavement patching is). Incorporated 90P-0270.

Section 834: Undersealing. This is a new section based off 90P-0285.

Section 835: Sealing Joints and Cracks. This is a new section based off 90P-0273-R02.

Section 836: Surfacing for Side Roads and Entrances. This is a rewrite of Section 308 of the 1990 Std Specs.

Section 837: Earthwork, Pavement Widening and Shouldering for Asphalt Overlay Projects. This is a new section based off 90M-6122. This specification is used with all 1-R overlay projects and most major modification projects.

Incorporated 90P-4509.

Used the information in Special Provision 90M-6528 and Lon Ingram's memo of October 11, 2000 for this Section. Removed the provisions that stated the Contractor must provide additional material if not enough existing material is present on the project. To require the Contractor to bid an unknown situation is a risk over which he has no control. If additional material is required, we should be willing to pay for it.

90P-4509 is equivalent of 90M-6528.

Section 838: Grinding Rehab Concrete Pavement. This is a new section based off 90M-4870.

Section 839: Rubblizing Portland Cement Concrete Pavement. This is a new section based off 90P-0124-R01.

Add provision that the Contractor provide equipment to verify rubble sizing requirements.

Eliminated tack coat before asphalt overlay. Since the tack does not penetrate the surface, the truck wheels tend to pick up the rubblized concrete and toss them about.

Section 840: Temporary Surfacing. This is a rewrite of Sections 816 and 606 of the 1990 Std Specs.

At the request of District personnel, removed the requirement of "a minimum of 2 rollers."

Added 'removal of material' information.

Section 841: Light Type Surfacing. This is a rewrite of Section 307 of the 1990 Std Specs. Eliminated the provision that others would provide the signing and traffic control - this should be a Contractor function. Eliminated the various units of pay - selected cubic yard (which is consistent with similar materials).

Section 842: Drilling and Grouting. This is a rewrite of Section 830 of the 1990 Std Specs. Incorporated 90M-6000.

Incorporated Special Provision 90P-4804. Incorporated 90P-0287.

Section 843: Flowable Fill. This is a new section based off 90P-0188-R02. Use this material to backfill open excavations where soil or aggregate is not called for or is impractical to be used. Some common uses are the backfilling of utility trenches that will be under structures and

pavements, backwall excavations, "Integral" (flexible) abutments, or narrow areas adjacent to RCB's.

Section 1400 of the 2007 Std Specs does not cover admixtures for this item. Added: "Provide admixtures for the flowable fill mixture as necessary to achieve flowability and acceptable set times. The Engineer will approve such admixtures based on performance."

Section 844: Slurry Grout. This is a new section based off 90P-0189. This material is used to fill cavities of non-functioning drainage structures such as culverts and RCB's that are buried in fills. Also used to fill voids under PCCP and concrete rip-rap at bridges and in drainage ditches. Low strength grout is generally used to fill cavities of drainage structures and voids under concrete rip-rap. High strength grout is generally used to fill cavities that develop under structures such as RCB's floors or footings. Underseal grout is used for filling voids under PCCP. Removed the reference to fly ash, since different admixtures can be used to make a grout. Added requirements for undersealing, they appropriate to me.

Section 1400 of the 2007 Std Specs does not cover admixtures for this item. Added: "Provide admixtures for the slurry grout mixture as necessary to achieve flowability and acceptable set times. The Engineer will approve such admixtures based on performance."

Did not incorporate 90P-0189-R02 (1995) into the specification because this existing draft copy was revised by the Bureau of Materials and Research in 1999.

Section 845: Cleaning Structures and Underdrains. This is a new section based off 90P-0204 and 90P-0134.

Added the requirement that the structure has to be clean not only during the course of the project, but also at the completion of the project.

Section 846: Transporting Salvageable Material. This is a new section based off 90P-0066-R01. Added the same requirements for protecting the salvaged items as found in Section 202-Removal of Existing Structures (Section 202).

Section 847: Mailbox Adjustments. This is a rewrite of Section 831 of the 1990 Std Specs. Incorporated 90P-0080-R01. Added information from "A Guide for Erecting Mailboxes on Highways" (AASHTO, 1994).

DIVISION 800 General Notes:

Section 801-Equipment of the 1990 Std Specs was eliminated from the 2007 Std Specs; this material is covered in DIVISION 150 of the 2007 Std Specs.

Subsection 809.02-Wash Checks of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 811-Pavement Widening of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 817-Railroad Signing of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 823-Terraces and Outlet Ditches of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 824-Permanent Barricade of the 1990 Std Specs was eliminated from the 2007 Std Specs.

Section 832-Mowing was moved to Section 908-Mowing.

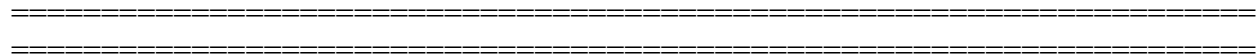
Shoulder Drop-off Treatment. Incorporated 90P-0179-R01.
This information will be included in 805-Work Zone Traffic Control.

Dowel Bar Retrofit (Existing PCCP). Special Provision 90P-0239.
Continue to handle by Special Provision, 90P-239-R1.

Pavement Edgedrains will be handled by Special Provision

Cracking and Seating Non-Reinforced Portland Cement Concrete Pavement is obsolete.

Plugging Wells will be handled by Special Provision.



DIVISION 900-ROADSIDE IMPROVEMENT, PLANTING AND SEEDING

Section 901: Temporary Erosion and Pollution Control. This is a rewrite of Section 904 and parts of 908 of the 1990 Std Specs. Incorporated 90P-0151-R13.

Section 902: Fertilizer, Agricultural Limestone, and Peat Moss. This is a rewrite of Section 907 of the 1990 Std Specs. Included 90P-94.

Section 903: Seeding. This is a rewrite of Section 903 of the 1990 Std Specs. Incorporated 90P-0083-R07.

Section 904: Mulching. This is a rewrite of parts of Section 908 of the 1990 Std Specs. Incorporated from 90P-0153-R07.

Changed bid item from Mulch-Tacking Slurry to Mulching (Tacking Slurry) to be consistent with the item code.

Section 905: Topsoil. This is a rewrite of Section 906 of the 1990 Std Specs.

Section 906: Sodding. This is a rewrite of Section 905 of the 1990 Std Specs.

Section 907: Trees, Shrubs and Other Plants. This is a rewrite of Section 902 of the 1990 Std Specs. Incorporated 90P-0299.

Eliminated the bid item for planting measured by the lump sum. This bid item has not been used in past years, and it is doubtful it would ever be used.

Section 908: Mowing. This is a rewrite of Section 832 of 1990 Std Specs.

Section 909: Compost. This is a new section based off of 90M-6754. The Environmental section wanted this included.

Section 910: Stone Masonry Retaining Walls and Tree Wells. This is a rewrite of Section 910 of the 1990 Std Specs. Additionally, Project Special Provision 90P-3479, Stone Masonry Retaining Wall, was incorporated into this specification.

Section 911: Park Structures. This is a rewrite of Section 911 of the 1990 Std Specs.

Section 912: Water Systems. This is a rewrite of Section 912 of the 1990 Std Specs.

DIVISION 900 General Notes:

Section 901-Equipment of the 1990 Std Specs was eliminated from the 2007 Std Specs; this material is covered in DIVISION 150 of the 2007 Std Specs.

Section 909-Pruning Existing Trees and Shrubs was eliminated from the 2007 Std Specs.

Environmental Section says that we do not use the Pruning Existing Trees and Hedges section/items. If trees are to be pruned, they are designated on the plans and included in the Clearing and Grubbing item. It is typically on City projects.