

# **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

*Please note:* New Amendments to the Standard Specifications are described below. Previous Amendments that are not revised in this package are still in effect. Amendments to the Standard Specifications take precedence over the Standard Specifications in accordance with Section 1-04.2.

The following list is a brief description of the latest revisions, with an explanation of why each change was made. The actual provisions should be reviewed in depth to become completely knowledgeable of the full extent of the revisions. These provisions are available at the following location: <http://www.wsdot.wa.gov/eesc/design/projectdev/>

## **DIVISION 1 – GENERAL REQUIREMENTS**

### **Section 1-07.8 High Visibility Apparel**

The section is changed to implement the FHWA Final Rule on Worker Visibility, which becomes effective on November 24, 2008. The new Rule requires all workers on foot within the right of way that are exposed to traffic or construction equipment to wear high visibility apparel meeting ANSI/ISEA 107-2004 Class 2 or 3 standard. WSDOT will add this requirement to active current contracts by change order.

### **Section 1-07.23 Public Convenience and Safety**

This section is modified by relocating the requirement for the contractor to assume all responsibility for safety on the project. These requirements are incorrectly associated with Construction under Traffic, but actually need to apply to all areas of the project, not just those under traffic. In addition, Sections 1-07.23(1) and 1-07.23(2) are enhanced to clarify that the contractor's responsibility for safety extends to pedestrian traffic on sidewalks and paths as well as vehicle traffic on the roadway.

### **Section 1-10.1(2) Description**

This section is changed to require that existing pedestrian routes be kept open unless otherwise provided for in the contract. This is done to assure that ADA accessible routes are not taken away during construction without an equivalent route being provided.

### **Section 1-10.2(2) Traffic Control Plans**

This section is changed to assure that pedestrians are accommodated on Traffic Control Plans proposed by the Contractor. This is done to assure that ADA accessible routes are not taken away during construction without an equivalent route being provided.

### **Section 1-10.3(2)B Rolling Slowdown**

This section is revised to clarify rolling slowdown usage and procedures. This section was reportedly confusing.

### **Section 1-10.3(3)A Construction Signs**

This section is changed to eliminate the 40-lb bag of sand suspended no more than 1-ft above the roadway because the NCHRP crash test standards prohibit it. This change aligns our contract with Industry standards.

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

### **Section 1-10.3(3)D Barricades**

This section is changed to eliminate the 40-lb bag of sand suspended no more than 1-ft above the roadway because the NCHRP crash test standards prohibit it. This change aligns our contract with Industry standards.

### **Section 1-10.3(3)K Portable Temporary Traffic Control Signal**

This section is revised to specify the temporary signals as a system instead of as two separate signals, and to require that the signal system be tended to by the TCS. The signal specs are relatively new and we are still learning how best to specify this work.

### **Section 1-10.4 Measurement**

This section is modified to make signal systems lump sum instead of paying for each signal individually. This change relates to the amendment to 1-10.3(3)K.

### **Section 1-10.5 Payment**

This section is modified to make signal systems lump sum instead of paying for each signal individually. This change relates to the amendment to 1-10.3(3)K.

## **DIVISION 5 – SURFACE TREATMENTS AND PAVEMENTS**

### **Section 5-02.3(3) Application of Asphalt Emulsion and Aggregate**

This revision corrects an incorrect application rate for asphalt for fog seal, and clarifies that CSS-1 or CSS-1h shall be diluted with water, but STE-1 shall not be diluted. Also, the charts are modified to better present Choke Stone application rates. Finally, we have modified CRS application temperature to align with Industry standards.

### **Section 5-02.3(10) Unfavorable Weather**

This section is modified to prevent BST application on shoulders and auxiliary lanes during winter months too, not just on the Traveled Way as defined in Section 1-01.3.

### **Section 5-04.3(16) Weather Limitations**

The surface temp requirements for HMA lifts over 0.35' are deleted because the specified condition cannot exist. WSDOT contracts do not allow a compacted HMA lift of greater than 0.35'. Therefore there is no need to specify a minimum surface temperature for lifts greater than 0.35'

### **Section 5-05.3(1) Concrete Mix Design for Paving**

Maximum aggregate size is changed from a maximum size equal to or greater than a 2 inch sieve to a nominal maximum aggregate size equal to or greater than a 1-½ -inch square sieve which matches up with Section 9-03.1(5)B Grading. Also, tolerances are being added to Section 5-05 to clarify the acceptable deviations from the concrete mix design, and bring section 5-05 in closer conformance with Section 6-02.

# **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

## **DIVISION 6 – STRUCTURES**

### **Section 6-02.3(2)A Contractor Mix Design**

This change increases the maximum nominal size aggregates for Concrete Class 4000D and 4000P. Larger aggregate sizes are desirable in the deck mixes to reduce shrinkage. The producers have preferred and supplied class 4000P mixes with 3/8" nominal max. aggregate size for some time. This change is requested by Industry.

### **Section 6-02.3(6)D Protection Against Vibration**

This change deletes the exclusion for protecting freshly placed concrete in shafts and soldier pile shafts from vibration. The protection requirement was included in the shaft special provision, but is now incorporated into the Standard Specs.

### **Section 6-02.3(12) Construction Joints**

This change deletes the ban on wire mesh forming material. We have noted successful forming of construction joints with welded wire mesh by many contractors on primarily local agency work up to now. Working with the AGC Structures Team, we have agreed to allow use of wire fabrics for forming construction joints.

### **Section 6-02.3(25) Prestressed Concrete Girders**

The listing of prestressed concrete wide flange I girders and spliced prestressed concrete girders is updated. The WSDOT family of prestressed concrete girders is being expanded by four - WF66G, WF100G, WF66PTG and WF100PTG.

### **Section 6-02.3(25)J Horizontal Alignment**

These changes clarify the timing for checking and recording horizontal alignment of each girder, and deletes the requirement to have alignment documentation for girders stored 120 days as part of the contractors Certificate of Compliance. This was creating a hold up in stamping prestressed girders for approval.

### **Section 6-02.3(25)K Girder Deflection**

These changes clarify the timing for checking and recording camber of each girder, and deletes the requirement to have camber documentation for girders stored 120 days as part of the contractors Certificate of Compliance. This was creating a hold up in stamping prestressed girders for approval.

### **Section 6-02.3(25)N Prestressed Concrete Girder Erection**

This change adds a requirement that the final horizontal alignment and camber check records shall be approved by the Engineer prior to erection.

### **Section 6-02.3(26)E Ducts**

This section is changed to enhance the corrosion protection of post tensioning reinforcement. The revisions are based on current FHWA and Kansas DOT specifications for post-tensioning ducts and grout. An expanded set of material and

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

construction requirements for duct vents, drains, caps and grout injection ports have been added. Field testing for leak tightness of the ducts has also been added.

### **Section 6-02.3(26)F Prestressing Reinforcement**

This section is changed to enhance the corrosion protection of post tensioning reinforcement. A material specification has been added for the corrosion inhibitor placed inside the ducts.

### **Section 6-02.3(26)H Grouting**

This section is changed to enhance the corrosion protection of post tensioning reinforcement. An expanded set of material and construction requirements for post-tensioning grout has been added. Among these added requirements are references to a performance based high-strength grout specification, requiring ASBI certification of grout technicians, requiring a Contractor prepared grouting operation plan, and requiring high-shear colloidal mixing of grout.

### **Section 6-05.3(11)A Tolerances**

This section is changed to clarify that the 2-inch tolerance applies to horizontal position for elevated caps. The Specification currently gives a 2-inch tolerance for piles that go into an elevated pier cap, and a 6-inch tolerance for piles that are capped below final grade. For piles capped below grade, the Specification is clear that the tolerance pertains to the horizontal position. This is not clear for the elevated cap.

### **Section 6-07.3(1) Painting New Steel Structures**

This section is changed so all three components of the painting system are now required to be from the same paint manufacturer to ensure compatibility.

### **Section 6-07.3(2)G Painting Steel Surfaces**

This section is changed so all three components of the painting system are now required to be from the same paint manufacturer to ensure compatibility.

### **Section 6-07.3(4) Painting Galvanized Surfaces**

The ASTM reference in Section 6-07.3(4) is updated to the current active ASTM specification. The ASTM specification currently referenced in Section 6-07.3(4) has been discontinued.

### **Section 6-07.3(5) Paint – Film Thickness**

The primer coat thickness requirements for faying surfaces are revised to defer the maximum thickness to be as recommended by the paint manufacturer, so long as coefficient of friction requirements are still met. The coating requirements for top flange surfaces to be embedded in concrete are revised to be a mist coat only, with shop installed welded shear connectors excluded from paint requirements except for incidental overspray.

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

### **Section 6-09.3(6) Further Deck Preparation**

This section requires the Contractor, with the Engineer, to perform an inspection of the scarified bridge deck to establish those areas of the bridge deck to receive bridge deck repair. However, a specific method of inspection is not specified. This change adds ASTM D 4580 Method B as the method to be used to inspect the bridge deck.

### **Section 6-09.3(6)B Deck Repair Preparation**

This section is revised to place the focus of deck repair preparation to the condition of the concrete surrounding the top mat of steel reinforcing bars. It is not the intent of the deck repair work to attempt repair of concrete surrounding the bottom mat of steel reinforcing bars as a general course of action. A deck repair properly keyed in with the top mat of steel reinforcing bars, along with the fresh concrete overlay, is considered sufficient to provide a structurally functional repair.

### **Section 6-09.3(6)C Placing Deck Repair Concrete**

This section is revised to provide more objectively based definitions for the two classifications of deck repair. Type 1 deck repairs are small and shallow repairs that are filled as part of the concrete overlay placement. Type 2 deck repairs are repairs extending below the bottom bar of the top mat of deck steel and repairs extending more than 12 inches along an exposed top bar.

### **Section 6-09.5 Payment**

The deck repair reference under the bid item "Modified Conc. Overlay" into revised to reference Type 1 deck repairs to conform with the revised terminology of Section 6-09.3(6)C.

### **Section 6-16.3(4) Installing Soldier Piles**

This spec is changed to provide additional corrosion protection. The change increases the specified depth of concrete cover over the soldier pile. Current Bridge and Structures Office design practice is to size the soldier pile and the soldier pile shaft to provide three inches of cover to the soldier pile and 1-1/2 inches cover to the soldier pile buildup assembly at permanent ground anchor locations.

### **Section 6-16.3(7) Prefabricated Drainage Mat**

The prefabricated drainage mat specifications are revised to require a four foot wide full height strip, centered between the soldier pile flanges, instead of a full width, full height mat. Based on discussions held by the ADSC/WSDOT team, and construction practiced used in private industry construction, the requirement for full width mats seems to be overly conservative.

## **DIVISION 7 – DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS**

### **Section 7-02.2 Materials**

This section is revised to allow corrugated polyethylene culvert pipe to be used in fills up to 25 ft deep. The AASHTO LRFD code for 2006 allows greater fills over PE pipe than

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

past design methods had allowed. The new code indicates that PE pipe could be structurally designed up to and even slightly over 25 foot fill heights. This issue has been discussed over the past few years at APWA Committee meetings as well as the WSDOT New Products Committee meetings, with no objections nor adverse concerns raised by either group.

### **Section 7-04.2 Materials**

This section is revised to allow corrugated polyethylene culvert pipe to be used in fills up to 25 ft deep. The AASHTO LRFD code for 2006 allows greater fills over PE pipe than past design methods had allowed. The new code indicates that PE pipe could be structurally designed up to and even slightly over 25 foot fill heights. This issue has been discussed over the past few years at APWA Committee meetings as well as the WSDOT New Products Committee meetings, with no objections nor adverse concerns raised by either group.

## **DIVISION 8 – MISCELLANEOUS CONSTRUCTION**

### **Section 8-01.3(1) General**

This spec is modified to delete the language that allows for changes to the prescribed soil covering time periods. This change is needed because the timelines for covering erodible earth not being worked are a requirement of the NPDES General Construction Stormwater Permit. The permit does not allow a deviation from the listed soil exposure limits. We have also modified "erodible soil" to "erodible earth" to be consistent with the term defined in the preceding paragraph.

### **Section 8-11.3(4) Removing Guardrail and Guardrail Anchors**

This section is changed to require partial removal of embedded anchors left behind after removing items fastened to concrete that is to remain. Embedded anchors are sometimes left protruding resulting in a safety hazard, or are cut flush with the existing surface resulting in corrosion of the exposed anchor and spalling/staining of the surrounding concrete.

### **Section 8-20.1 Description**

This section is modified to bring Intelligent Transportation Systems (ITS) into the Standard Specifications. Provisions for this work have been included in General Special Provisions, but are being incorporated into the Standards.

### **Section 8-20.3(1) General**

This section is changed to require partial removal of embedded anchors left behind after removing items fastened to concrete that is to remain. Embedded anchors are sometimes left protruding resulting in a safety hazard, or are cut flush with the existing surface resulting in corrosion of the exposed anchor and spalling/staining of the surrounding concrete.

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

### **Section 8-20.3(5) Conduit**

This section is updated with additional requirements for HDPE conduit and for directional boring, as well as numerous clarifications (such as conduit clamp spacing, warning tape and location wire requirements) and rearranging of the section to enhance readability as recommended by the Electrical Partnering Team.

### **Section 8-20.3(6) Junction Boxes, Cable Vaults, and Pull Boxes**

This change increases the allowable clearance between the top of the conduit and the bottom of the j-box lid.

### **Section 8-20.3(8) Wiring**

This change adds fusing requirements of quick disconnect connectors. They were previously required to be fused "as needed," but with no indications when that was.

### **Section 8-20.3(13)D Sign Lighting**

This section is revised to remove unnecessary references to things shown in the Plans.

### **Section 8-20.3(13)E Sign Lighting Luminaires**

This section is revised to delete an inappropriate material reference. Materials properties are already properly referenced in Section 8-20.2, Materials.

### **Section 8-20.4 Measurement**

This section is changed to include Intelligent Transportation Systems (ITS).

### **Section 8-20.5 Payment**

This section is changed to include Intelligent Transportation Systems (ITS).

### **Section 8-21.3(4) Sign Removal**

This section is changed to require partial removal of embedded anchors left behind after removing items fastened to concrete that is to remain. Embedded anchors are sometimes left protruding resulting in a safety hazard, or are cut flush with the existing surface resulting in corrosion of the exposed anchor and spalling/staining of the surrounding concrete.

## **DIVISION 9 – MATERIALS**

### **Section 9-03.8(7) HMA Tolerances and Adjustments**

The statement that says, "The tolerance limits on sieves shall only apply to sieves with control points" is not correct, and is deleted. The tolerances need to apply to all sieves that are used in the statistical analysis and those are the sieves that are equal to or smaller than the 100% passing sieve and listed on the table in Section 5-04.5(1)A.

### **Section 9-04.2(1) Hot Poured Joint Sealants**

WSDOT is eliminating the WSDOT Test Method and referencing test methods that are standard in the Industry. Also by making these changes we would basically be allowing

## **New Amendments to the 2008 Standard Specifications Effective December 1, 2008**

the hot poured joint sealant that has been working the last few years and it shouldn't require any changes other than WSDOT is now moving toward an industry standard for the testing.

### **Section 9-07.10 Prestressing Reinforcement Strand**

These changes require longer samples, and are needed to allow proper testing of the samples. The specified sample length is too short to fit properly in the testing machine.

### **Section 9-07.11 Prestressing Reinforcement Bar**

These changes require longer samples, and are needed to allow proper testing of the samples. The specified sample length is too short to fit properly in the testing machine.

### **Section 9-16.2(1)A Steel Post Material**

This change reduces the galvanizing requirement for angle-post spades. This change is required because the fence post is galvanized as a complete unit comprised of an angle post and plate. The difference in material properties results in the post attracting more galvanizing than the plate. To accomplish the required amount of galvanizing on the plate, the post will end up with approximately two to four times the amount of galvanizing required. Excessive galvanizing coating thickness can be detrimental as it becomes hard and brittle and is prone to chipping. WSDOT has determined that a reduced amount of galvanizing on the plate will still provide adequate service life for the intended purpose (approximately 40 years).

### **Section 9-28.9(1) Mechanical Properties**

This change corrects a typographical error. The references to "103" and "106" in the table are incorrect - the "3" and "6" should be in superscript as in 10 to the 3<sup>rd</sup> and 10 to the 6<sup>th</sup> power. This Section was printed correctly in the 1991 Standard Specifications, but has been printed incorrectly for the eight subsequent editions.

### **Section 9-30.3(1) Gate Valves (3-inches to 16-inches)**

This change eliminates the three certified copies of test reports, and accepts an affidavit stating compliance to the specified tests. This change is made because the existing requirement has been determined to be overkill - too many tests are required but not needed. This new acceptance method is consistent with how WSDOT accepts other valves.

### **Section 9-35.2 Construction Signs**

This change is made to eliminate the last remaining vestiges of the NCHRP 350 compliance phase-in for Category 2 Devices that expired on December 31, 2007. In addition, the change reserves allowance for new aluminum composite signs that may be used in the future.

### **Section 9-35.14 Portable Temporary Traffic Control Signal**

This spec is enhanced by defining the color of the retroreflective material that is to be installed around the signal head.