

AMMENDMENTS TO THE STANDARD
SPECIFICATIONS

FOR

CITY OF FIFE

58TH AVENUE SIDEWALK IMPROVEMENTS

July 2015

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1 **INTRODUCTION**

2 The following Amendments and Special Provisions shall be used in conjunction with the
3 2014 Standard Specifications for Road, Bridge, and Municipal Construction.
4

5 **AMENDMENTS TO THE STANDARD SPECIFICATIONS**
6

7 The following Amendments to the Standard Specifications are made a part of this contract
8 and supersede any conflicting provisions of the Standard Specifications. For informational
9 purposes, the date following each Amendment title indicates the implementation date of the
10 Amendment or the latest date of revision.
11

12 Each Amendment contains all current revisions to the applicable section of the Standard
13 Specifications and may include references which do not apply to this particular project.
14

15 **Section 1-01, Definitions and Terms**
16 **August 4, 2014**

17 **1-01.3 Definitions**

18 The definition for “**Engineer**” is revised to read:

19

20 The Contracting Agency’s representative who directly supervises the engineering and
21 administration of a construction Contract.
22

23 The definition for “**Inspector**” is revised to read:

24

25 The Engineer’s representative who inspects Contract performance in detail.
26

27 The definition for “**Project Engineer**” is revised to read:

28

29 Same as Engineer.
30

31 The definition for “**Working Drawings**” is revised to read:

32

33 Drawings, plans, diagrams, or any other supplementary data or calculations, including a
34 schedule of submittal dates for Working Drawings where specified, which the Contractor
35 must submit to the Engineer.
36

37 **Section 1-02, Bid Procedures and Conditions**
38 **April 7, 2014**

39 **1-02.8(1) Noncollusion Declaration**

40 The third paragraph is revised to read:

41

42 Therefore, by including the Non-collusion Declaration as part of the signed bid Proposal,
43 the Bidder is deemed to have certified and agreed to the requirements of the
44 Declaration.
45

1 **Section 1-03, Award and Execution of Contract**
2 **January 5, 2015**

3 **1-03.3 Execution of Contract**

4 The first paragraph is revised to read:

5

6 Within 20 calendar days after the Award date, the successful Bidder shall return the
7 signed Contracting Agency-prepared Contract, an insurance certification as required by
8 Section 1-07.18, and a satisfactory bond as required by law and Section 1-03.4, and
9 shall be registered as a contractor in the state of Washington.

10

11 **1-03.4 Contract Bond**

12 The last word of item 3 is deleted.

13

14 Item 4 is renumbered to 5.

15

16 The following is inserted after item 3 (after the preceding Amendments are applied):

17

18 4. Be conditioned upon the payment of taxes, increases, and penalties incurred on the
19 project under titles 50, 51, and 82 RCW; and

20

21 **1-03.5 Failure to Execute Contract**

22 The first sentence is revised to read:

23

24 Failure to return the insurance certification and bond with the signed Contract as
25 required in Section 1-03.3, or failure to provide Disadvantaged, Minority or Women's
26 Business Enterprise information if required in the Contract, or failure or refusal to sign
27 the Contract, or failure to register as a contractor in the state of Washington shall result
28 in forfeiture of the proposal bond or deposit of this Bidder.

29

30 **Section 1-04, Scope of the Work**

31 **August 4, 2014**

32 **1-04.4 Changes**

33 In the third paragraph, item number 1 and 2 are revised to read:

34

35 A. When the character of the Work as altered differs materially in kind or nature from
36 that involved or included in the original proposed construction; or

37

38 B. When an item of Work, as defined elsewhere in the Contract, is increased in excess
39 of 125 percent or decreased below 75 percent of the original Contract quantity. For
40 the purpose of this Section, an item of Work will be defined as any item that qualifies
41 for adjustment under the provisions of Section 1-04.6.

42

43 The last two paragraphs are deleted.

44

45 This section is supplemented with the following new subsections:

46

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1 **1-04.4(2) Value Engineering Change Proposal (VECP)**

2
3 **1-04.4(2)A General**

4 A VECP is a Contractor proposed change to the Contract Provisions which will
5 accomplish the projects functional requirements in a manner that is equal to or
6 better than the requirements in the Contract. The VECP may be: (1) at a less cost
7 or time, or (2) either no cost savings or a minor increase in cost with a reduction in
8 Contract time. The net savings or added costs to the Contract Work are shared by
9 the Contractor and Contracting Agency.

10
11 The Contractor may submit a VECP for changing the Plans, Specifications, or other
12 requirements of the Contract. The Engineer's decision to accept or reject all or part
13 of the proposal is final and not subject to arbitration under the arbitration clause or
14 otherwise subject to litigation.

15
16 The VECP shall meet all of the following:

- 17
18 1. Not adversely affect the long term life cycle costs.
19
20 2. Not adversely impact the ability to perform maintenance.
21
22 3. Provide the required safety and appearance.
23
24 4. Provide substitution for deleted or reduced Disadvantaged Business
25 Enterprise Condition of Award Work, Apprentice Utilization and Training.

26
27 VECPs that provide a time reduction shall meet the following requirements:

- 28
29 1. Time saving is a direct result of the VECP.
30
31 2. Liquidated damages penalties are not used to calculate savings.
32
33 3. Administrative/overhead cost savings experienced by either the Contractor
34 or Contracting Agency as a result of time reduction accrue to each party
35 and are not used to calculate savings.

36
37 **1-04.4(2)B VECP Savings**

38
39 **1-04.4(2)B1 Proposal Savings**

40 The incentive payment to the Contractor shall be one-half of the net savings of
41 the proposal calculated as follows:

- 42
43 1. (gross cost of deleted work) – (gross cost of added work) = (gross
44 savings)
45
46 2. (gross savings) – (Contractor's engineering costs) – (Contracting
47 Agency's costs) = (net savings)
48
49 3. (net savings) / 2 = (incentive pay)
50

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The Contracting Agency's costs shall be the actual consultant costs billed to the Contracting Agency and in-house costs. Costs for personnel assigned to the Engineer's office shall not be included.

1-04.4(2)B2 Added Costs to Achieve Time Savings

The cost to achieve the time savings shall be calculated as follows:

1. (cost of added work) + (Contractor's engineering costs - Contracting Agency's engineering costs) = (cost to achieve time savings)
2. (cost to achieve time savings) / 2 = (Contracting Agency's share of added cost)

If the timesaving proposal also involves deleting work and, as a result, creates a savings for the Contracting Agency, then the Contractor shall also receive one-half of the savings realized through the deletion.

1-04.4(2)C VECP Approval

1-04.4(2)C1 Concept Approval

The Contractor shall submit a written proposal to the Engineer for consideration. The proposal shall contain the following information:

1. An explanation outlining the benefit provided by the change(s).
2. A narrative description of the proposed change(s). If applicable, the discussion shall include a demonstration of functional equivalency or a description of how the proposal meets the original contract scope of work.
3. A cost discussion estimating any net savings. Savings estimates will generally follow the outline below under the section, "Proposal Savings".
4. A statement providing the Contracting Agency with the right to use all or any part of the proposal on future projects without future obligation or compensation.
5. A statement acknowledging and agreeing that the Engineer's decision to accept or reject all or part of the proposal is final and not subject to arbitration under the arbitration clause or otherwise be subject to claims or disputes.
6. A statement giving the dates the Engineer must make a decision to accept or reject the conceptual proposal, the date that approval to proceed must be received, and the date the work must begin in order to not delay the contract. If the Contracting Agency does not approve the VECP by the date specified by the Contractor in their proposal the VECP will be deemed rejected.

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7. The submittal will include an analysis on other Work that may have costs that changed as a result of the VECP. Traffic control and erosion control shall both be included in addition to any other impacted Work.

After review of the proposal, the Engineer will respond in writing with acceptance or rejection of the concept. This acceptance shall not be construed as authority to proceed with any change contract work. Concept approval allows the Contractor to proceed with the Work needed to develop final plans and other information to receive formal approval and to support preparation of a change order.

1-04.4(2)C2 Formal Approval

The Contractor’s submittal to the Engineer for formal approval shall include the following:

1. Deleted Work – Include the calculated quantities of unit price Work to be deleted. Include the proposed partial prices for portions of lump sum Work deleted. For deletion of force account items include the time and material estimates.
2. Added Work – Include the calculated quantities of unit price Work to be added, either by original unit Contract prices or by new, negotiated unit prices. For new items of Work include the quantities and proposed prices.
3. Contractor’s Engineering Costs – Submit the labor costs for the engineering to develop the proposal; costs for Contractor employees utilized in contract operations on a regular basis shall not be included.
4. Schedule Analysis – If the VECP is related to time savings, the Contractor shall submit a partial progress schedule showing the changed Work. The submittal shall also include a discussion comparing the partial progress schedule with the approved progress schedule for the project.
5. Working Drawings – Type 3 Working Drawings shall be submitted; those drawings which require engineering shall be a Type 3E.

Formal approval of the proposal will be documented by issuance of a change order. The VECP change order will contain the following statements which the Contractor agrees to by signing the change order:

1. The Contractor accepts design risk of all features, both temporary and permanent, of the changed Work.
2. The Contractor accepts risk of constructability of the changed Work.
3. The Contractor provides the Contracting Agency with the right to use all or any part of the proposal on future projects without further obligation or compensation.

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VECP change orders will contain separate pay items for the items that are applicable to the Proposal. These are as follows:

1. Deleted Work.
2. Added Work.
3. The Contractor's engineering costs, reimbursed at 100 percent of the Contractor's cost.
4. Incentive payment to the Contractor.

When added Work costs exceed Deleted Work costs, but time savings make a viable proposal, then items 3 and 4 above are replaced with the following:

3. The Contracting Agency's share of added cost to achieve time savings.
4. The Contractor's share of savings from deleted Work.

1-04.4(2)C3 Authority to Proceed with Changed Work

The authority for the Contractor to proceed with the VECP Work will be provided by one of the following options:

1. Execution of the VECP change order, or
2. At the Contractor's request the Contracting Agency may provide approval by letter from the Engineer for the Work to proceed prior to execution of a change order. All of the risk for proceeding with the VECP shall be the responsibility of the Contractor. Additionally, the following criteria are required to have been met:
 - a) Concept approval has been granted by the Contracting Agency.
 - b) All design reviews and approvals have been completed, including plans and specifications.
 - c) The Contractor has guaranteed, in writing, the minimum savings to the Contracting Agency.

**Section 1-05, Control of Work
August 4, 2014**

1-05.1 Authority of the Engineer

In this section, "Project Engineer" is revised to read "Engineer".

The second paragraph (up until the colon) is revised to read:

The Engineer's decisions will be final on all questions including the following:

The first sentence in the third paragraph is revised to read:

1 The Engineer represents the Contracting Agency with full authority to enforce Contract
2 requirements.

3
4 **1-05.2 Authority of Assistants and Inspectors**

5 The first paragraph is revised to read:

6
7 The Engineer may appoint assistants and Inspectors to assist in determining that the
8 Work and materials meet the Contract requirements. Assistants and Inspectors have the
9 authority to reject defective material and suspend Work that is being done improperly,
10 subject to the final decisions of the Engineer.

11
12 In the third paragraph, "Project Engineer" is revised to read "Engineer".

13
14 **1-05.3 Plans and Working Drawings**

15 This section's title is revised to read:

16
17 **Working Drawings**

18
19 This section is revised to read:

20
21 The Contract may require the Contractor to submit Working Drawings for the
22 performance of the Work. Working Drawings shall be submitted by the Contractor
23 electronically to the Engineer in PDF format; drawing details shall be prepared in
24 accordance with conventional detailing practices. If the PDF format is found to be
25 unacceptable, at the request of the Engineer, the Contractor shall provide paper copies
26 of the Working Drawings with drawings on 11 by 17 inch sheets and calculations/text on
27 8½ by 11 inch sheets.

28
29 Working Drawings will be classified under the following categories:

- 30
31 1. **Type 1** – Submitted for Contracting Agency information. Submittal must be
32 received by the Contracting Agency a minimum of 7 calendar days before work
33 represented by the submittal begins.
- 34
35 2. **Type 2** – Submitted for Contracting Agency review and comment. Unless
36 otherwise stated in the Contract, the Engineer will require up to 20 calendar
37 days from the date the Working Drawing is received until it is returned to the
38 Contractor. The Contractor shall not proceed with the Work represented by the
39 Working Drawing until comments from the Engineer have been addressed.
- 40
41 3. **Type 2E** – Same as a Type 2 Working Drawing with Engineering as described
42 below.
- 43
44 4. **Type 3** – Submitted for Contracting Agency review and approval. Unless
45 otherwise stated in the Contract, the Engineer will require up to 30 calendar
46 days from the date the Working Drawing is received until it is returned to the
47 Contractor. The Contractor shall obtain the Engineer's written approval before
48 proceeding with the Work represented by the Working Drawing.
- 49
50 5. **Type 3E** – Same as a Type 3 Working Drawing with Engineering as described
51 below.
- 52

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1 All Working Drawings shall be considered Type 3 Working Drawings except as
2 specifically noted otherwise in the Contract. Unless designated otherwise by the
3 Contractor, submittals of Working Drawings will be reviewed in the order they are
4 received by the Engineer. In the event that several Working Drawings are received
5 simultaneously, the Contractor shall specify the sequence in which they are to be
6 reviewed. If the Contractor does not submit a review sequence for simultaneous
7 Working Drawing submittals, the review sequence will be at the Engineer's discretion.

8
9 Working Drawings requiring Engineering, Type 2E and 3E, shall be prepared by (or
10 under the direction of) a Professional Engineer, licensed under Title 18 RCW, State of
11 Washington, and in accordance with WAC 196-23-020. Design calculations shall carry
12 the Professional Engineer's signature and seal, date of signature, and registration
13 number on the cover page. The cover page shall also include the Contract number,
14 Contract title and sequential index to calculation page numbers.

15
16 If more than the specified number of days is required for the Engineer's review of any
17 individual Working Drawing or resubmittal, an extension of time will be considered in
18 accordance with Section 1-08.8.

19
20 Review or approval of Working Drawings shall neither confer upon the Contracting
21 Agency nor relieve the Contractor of any responsibility for the accuracy of the drawings
22 or their conformity with the Contract. The Contractor shall bear all risk and all costs of
23 any Work delays caused by rejection or nonapproval of Working Drawings.

24
25 Unit Bid prices shall cover all costs of Working Drawings.

26
27 **Section 1-07, Legal Relations and Responsibilities to the Public**
28 **January 5, 2015**

29 **1-07.2 State Taxes**

30 This section is revised to read:

31
32 The Washington State Department of Revenue has issued special rules on the state
33 sales tax. Sections 1-07.2(1) through 1-07.2(3) are meant to clarify those rules. The
34 Contracting Agency will not adjust its payment if the Contractor bases a Bid on a
35 misunderstood tax liability.

36
37 The Contracting Agency may deduct from its payments to the Contractor, retainage or
38 lien the bond, in the amount the Contractor owes the State Department of Revenue,
39 whether the amount owed relates to the Contract in question or not. Any amount so
40 deducted will be paid into the proper State fund on the contractor's behalf. For
41 additional information on tax rates and application refer to applicable RCWs, WACs or
42 the Department of Revenue's website.

43
44 **1-07.2(1) State Sales Tax: Work Performed on City, County, or Federally-**
45 **Owned Land**

46 This section including title is revised to read:

47
48 **1-07.2(1) State Sales Tax: WAC 458-20-171 – Use Tax**

49 For Work designated as Rule 171, **Use Tax**, the Contractor shall include for
50 compensation the amount of any taxes paid in the various unit Bid prices or other
51 Contract amounts. Typically, these taxes are collected on materials incorporated into the

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1 project and items such as the purchase or rental of; tools, machinery, equipment, or
2 consumable supplies not integrated into the project.

3
4 The Summary of Quantities in the Contract Plans identifies those parts of the project
5 that are subject to **Use Tax** under Section 1-07.2(1).
6

7 **1-07.2(2) State Sales Tax: Work on State-Owned or Private Land**

8 This section including title is revised to read:
9

10 **1-07.2(2) State Sales Tax: WAC 458-20-170 – Retail Sales Tax**

11 For Work designated as Rule 170, **Retail Sales Tax**, the Contractor shall collect from
12 the Contracting Agency, **Retail Sales Tax** on the full Contract price. The Contracting
13 Agency will automatically add this **Retail Sales Tax** to each payment to the Contractor
14 and for this reason; the Contractor shall not include the **Retail Sales Tax** in the unit Bid
15 prices or in any other Contract amount. However, the Contracting Agency will not
16 provide additional compensation to the Prime Contractor or Subcontractor for **Retail**
17 **Sales Taxes** paid by the Contractor in addition to the **Retail Sales Tax** on the total
18 contract amount. Typically, these taxes are collected on items such as the purchase or
19 rental of; tools, machinery, equipment, or consumable supplies not integrated into the
20 project. Such sales taxes shall be included in the unit Bid prices or in any other Contract
21 amounts.
22

23 The Summary of Quantities in the Contract Plans identifies those parts of the project
24 that are subject to **Retail Sales Tax** under Section 1-07.2(2).
25

26 **1-07.2(3) Services**

27 This section is revised to read:
28

29 Any contract wholly for professional or other applicable services is generally not subject
30 to **Retail Sales Tax** and therefore the Contractor shall not collect **Retail Sales Tax** from
31 the Contracting Agency on those Contracts. Any incidental taxes paid as part of
32 providing the services shall be included in the payments under the contract.
33

34 **1-07.23(1) Construction Under Traffic**

35 In the second paragraph, the following new sentence is inserted after the second sentence:
36

37 Accessibility to existing or temporary pedestrian push buttons shall not be impaired.
38

39 **Section 1-08, Prosecution and Progress** 40 **May 5, 2014**

41 **1-08.1 Subcontracting**

42 The eighth paragraph is revised to read:
43

44 On all projects, the Contractor shall certify to the actual amounts paid to Disadvantaged,
45 Minority, Women's, or Small Business Enterprise firms that were used as
46 Subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service
47 providers on the Contract. This Certification shall be submitted to the Project Engineer
48 on a monthly basis each month between Execution of the Contract and Physical
49 Completion of the contract using the application available at:
50 <https://remoteapps.wsdot.wa.gov/mapsdata/tools/dbeparticipation>. The monthly report is
51 due 20 calendar days following the end of the month. A monthly report shall be

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1 submitted for every month between Execution of the Contract and Physical Completion
2 regardless of whether payments were made or work occurred.

3
4 The ninth paragraph is deleted.

5
6 **Section 1-09, Measurement and Payment**
7 **January 5, 2015**

8 **1-09.6 Force Account**

9 In the third paragraph of item number 3, the last sentence is revised to read:

10

11 In the event that prior quotations are not obtained and the vendor is not a firm
12 independent from the Contractor or Subcontractor, then after-the-fact quotations may be
13 obtained by the Engineer from the open market in the vicinity and the lowest such
14 quotation may be used in place of submitted invoice.

15

16 **Section 1-10, Temporary Traffic Control**
17 **August 4, 2014**

18 **1-10.1(1) Materials**

19 The following material reference is deleted from this section:

20

21 Barrier Drums 9-35.8

22

23 **1-10.1(2) Description**

24 The first paragraph is revised to read:

25

26 The Contractor shall provide flaggers, and all other personnel required for labor for
27 traffic control activities and not otherwise specified as being furnished by the
28 Contracting Agency.

29

30 **1-10.2(1) General**

31 In the third paragraph, the first two sentences are revised to read:

32

33 The primary and alternate TCS shall be certified by one of the organizations listed in the
34 Special Provisions. Possession of a current Washington State TCS card and flagging
35 card by the primary and alternate TCS is mandatory.

36

37 **1-10.2(1)B Traffic Control Supervisor**

38 The first paragraph is revised to read:

39

40 A Traffic Control Supervisor (TCS) shall be present on the project whenever flagging or
41 other traffic control labor is being utilized or less frequently, as authorized by the
42 Engineer.

43

44 The last paragraph is revised to read:

45

46 The TCS may perform the Work described in Section 1-10.3(1)A Flaggers or in Section
47 1-10.3(1)B Other Traffic Control Labor and be compensated under those Bid items,
48 provided that the duties of the TCS are accomplished.

49

AMENDMENTS

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

2 The first paragraph is revised to read:

3

4 The traffic control plan or plans appearing in the Contract documents show a method of
5 handling vehicle, bicycle, and pedestrian traffic. All construction signs, flaggers, and
6 other traffic control devices are shown on the traffic control plan(s) except for
7 emergency situations. If the Contractor proposes adding the use of flaggers to a plan,
8 this will constitute a modification requiring approval by the Engineer. The modified plans
9 shall show locations for all the required advance warning signs and a safe, protected
10 location for the flagging station. If flagging is to be performed during hours of darkness,
11 the plan shall include appropriate illumination for the flagging station.

12

13 In the second paragraph, the second sentence is revised to read:

14

15 Any Contractor-proposed modification, supplement or replacement shall show the
16 necessary construction signs, flaggers, and other traffic control devices required to
17 support the Work.

18

19 **1-10.2(3) Conformance to Established Standards**

20 In the second paragraph, the second sentence is revised to read:

21

22 The National Cooperative Highway Research Project (NCHRP) Report 350 and the
23 AASHTO Manual for Assessing Safety Hardware (MASH) have established
24 requirements for crash testing.

25

26 In the third paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

27

28 In the fourth paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

29

30 In the fifth paragraph, "NCHRP 350" is revised to read "NCHRP 350 or MASH".

31

32 **1-10.3(1) Traffic Control Labor**

33 The first paragraph is revised to read:

34

35 The Contractor shall furnish all personnel for flagging, for the execution of all
36 procedures related to temporary traffic control and for the setup, maintenance and
37 removal of all temporary traffic control devices and construction signs necessary to
38 control vehicular, bicycle, and pedestrian traffic during construction operations.

39

40 **1-10.3(1)A Flaggers and Spotters**

41 This section's title is revised to read:

42

43 **Flaggers**

44

45 The first paragraph is revised to read:

46

47 Flaggers shall be posted where shown on approved Traffic Control Plans or where
48 directed by the Engineer. All flaggers shall possess a current flagging card issued by the
49 State of Washington, Oregon, Montana, or Idaho. The flagging card shall be
50 immediately available and shown to the Contracting Agency upon request.

51

52 The last paragraph is deleted.

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1-10.3(1)B Other Traffic Control Labor

This section is revised to read:

In addition to flagging duties, the Contractor shall provide personnel for all other traffic control procedures required by the construction operations and for the labor to install, maintain and remove any traffic control devices shown on Traffic Control Plans.

1-10.3(3)B Sequential Arrow Signs

This section is supplemented with the following:

A sequential arrow sign is required for all lane closure tapers on a multilane facility. A separate sequential arrow sign shall be used for each closed lane. The arrow sign shall not be used to laterally shift traffic. When used in the caution mode, the four corner mode shall be used.

1-10.3(3)C Portable Changeable Message Signs

This section is revised to read:

Where shown on an approved traffic control plan or where ordered by the Engineer, the Contractor shall provide, operate, and maintain portable changeable message signs (PCMS). A PCMS shall be placed behind a barrier or guardrail whenever possible, but shall at a minimum provide 4 ft. of lateral clearance to edge of travelled lane and be delineated by channelization devices. The Contractor shall remove the PCMS from the clear zone when not in use unless protected by barrier or guardrail.

1-10.3(3)F Barrier Drums

This section including title is deleted in its entirety and replaced with the following:

1-10.3(3)F Vacant

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

The fifth paragraph is revised to read:

The Project Engineer or designee will inspect the signal system at initial installation/operation and approve the signal timing. Final approval will be based on the results of the operational inspection.

1-10.4(2) Item Bids With Lump Sum for Incidentals

In the second paragraph, the first and second sentences are revised to read:

“Flaggers” will be measured by the hour. Hours will be measured for each flagging station, shown on an approved Traffic Control Plan, when that station is staffed in accordance with Section 1-10.3(1)A.

The first sentence of the last bulleted item in this section is revised to read:

Installing and removing Barricades, Traffic Safety Drums, Cones, Tubular Markers and Warning Lights and Flashers to carry out approved Traffic Control Plan(s).

1-10.5(2) Item Bids With Lump Sum for Incidentals

This section is deleted and replaced with the following:

AMENDMENTS

1
2 "Traffic Control Supervisor", lump sum.
3
4 The lump sum Contract payment shall be full compensation for all costs incurred by the
5 Contractor in performing the Work defined in Section 1-10.2(1)B.
6
7 "Pedestrian Traffic Control", lump sum.
8
9 The lump sum Contract payment shall be full compensation for all costs incurred by the
10 Contractor in performing the Work for pedestrian traffic control defined in Section 1-10.
11
12 "Flaggers", per hour.
13
14 The unit Contract price, when applied to the number of units measured for this item in
15 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred
16 by the Contractor in performing the Work defined in Section 1-10.3(1)A.
17
18 "Other Traffic Control Labor", per hour.
19
20 The unit Contract price, when applied to the number of units measured for this item in
21 accordance with Section 1-10.4(2), shall be full compensation for all labor costs incurred
22 by the Contractor in performing the Work specified for this item in Section 1-10.4(2).
23
24 "Construction Signs Class A", per square foot.
25
26 The unit Contract price, when applied to the number of units measured for this item in
27 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by
28 the Contractor in performing the Work described in Section 1-10.3(3)A. In the event that
29 "Do Not Pass" and "Pass With Care" signs must be left in place, a change order, as
30 described in Section 1-04.4, will be required. When the Bid Proposal contains the item
31 "Sign Covering", then covering those signs indicated in the Contract will be measured
32 and paid according to Section 8-21.
33
34 "Sequential Arrow Sign", per hour.
35
36 The unit Contract price, when applied to the number of units measured for this item in
37 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by
38 the Contractor in performing the Work described in Section 1-10.3(3)B.
39
40 "Portable Changeable Message Sign", per hour.
41
42 The unit Contract price, when applied to the number of units measured for this item in
43 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by
44 the Contractor in performing the Work for procuring all portable changeable message
45 signs required for the project and for transporting these signs to and from the project.
46
47 "Transportable Attenuator", per each.
48
49 The unit Contract price, when applied to the number of units measured for this item in
50 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by
51 the Contractor in performing the Work described in Section 1-10.3(3)J except for costs

AMENDMENTS

1 compensated separately under the items “Operation of Transportable Attenuator” and
2 “Repair Transportable Attenuator”.
3
4 “Operation of Transportable Attenuator”, per hour.
5
6 The unit Contract price, when applied to the number of units measured for this item in
7 accordance with Section 1-10.4(2), shall be full compensation for all costs incurred by
8 the Contractor in performing the Work for operating transportable attenuators on the
9 project.
10
11 “Repair Transportable Attenuator”, by force account.
12
13 All costs of repairing or replacing transportable attenuators that are damaged by the
14 motoring public while in use as shown on an approved Traffic Control Plan will be paid
15 for by force account as specified in Section 1-09.6. To provide a common Proposal for
16 all Bidders, the Contracting Agency has estimated the amount of force account for
17 “Repair Transportable Attenuator” and has entered the amount in the Proposal to
18 become a part of the total Bid by the Contractor. Transportable attenuators damaged
19 due to the Contractor’s operation or damaged in any manner when not in use shall be
20 repaired or replaced by the Contractor at no expense to the Contracting Agency.
21
22 “Other Temporary Traffic Control”, lump sum.
23
24 The lump sum Contract payment shall be full compensation for all costs incurred by the
25 Contractor in performing the Work defined in Section 1-10, and which costs are not
26 compensated by one of the above-listed items.
27
28 “Portable Temporary Traffic Control Signal”, lump sum.
29
30 The lump sum Contract payment shall be full compensation for all costs incurred by the
31 Contractor in performing the Work as described in Section 1-10.3(3)K, including all
32 costs for traffic control during manual control, adjustment, malfunction, or failure of the
33 portable traffic control signals and during replacement of failed or malfunctioning
34 signals.
35
36 **Section 2-01, Clearing, Grubbing, and Roadside Cleanup**
37 **August 4, 2014**
38 **2-01.3(1) Clearing**
39 In the second paragraph, item number 3 (up until the colon) is revised to read:
40
41 3. Follow these requirements for all stumps that will be buried deeper than 5 feet from
42 the top, side, or end surface of the embankment or any structure and are in a
43 location that will not be terraced as described in Section 2-03.3(14):
44
45 **Section 2-02, Removal of Structures and Obstructions**
46 **January 5, 2015**
47 **2-02.3(2) Removal of Bridges, Box Culverts, and Other Drainage Structures**
48 This section is supplemented with the following new subsections:
49

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2-02.3(2)A Bridge Removal

2-02.3(2)A1 Bridge Demolition Plan Submittal

The Contractor shall submit a Type 2E Working Drawing consisting of a bridge demolition plan, showing the method of removing the existing bridge(s), or portions of bridges, as specified.

The bridge demolition plan shall show all equipment, sequence of operations, and details required to complete the work, including containment, collection, and disposal of all debris. The plan shall include a crane foundation stability analysis and crane load calculations for the work. The plan shall detail the containment, collection, and disposal of all debris. The plan shall show all stages of demolition.

When the bridge removal work includes removal of a truss, and when the Contractor's removal method involves use of a crane or cranes to pick, lift, and remove the truss, the Contractor shall confirm the truss dead load weight prior to beginning the truss removal operation. The operation of confirming the truss dead load shall be performed at both ends of the truss, and shall ensure that the truss is broken free of its support bearings. The Contractor's method of confirming the truss dead load, whether by hydraulic jacks or other means, shall be included in the Contractor's bridge demolition plan submittal.

When the bridge removal work involves removing portions of existing concrete without replacement, the methods and tools used to achieve the smooth surface and profile specified in Section 2-02.3(2)A2 shall be included in the Contractor's bridge demolition plan submittal.

2-02.3(2)A2 Removing Portions of Existing Concrete

Care shall be taken in removing concrete to prevent overbreakage or damage to portions of the existing Structure which are to remain. Before concrete removal begins, a saw cut shall be made into the surface of the concrete at the perimeter of the removal limits. The saw cut shall be 3/4-inch deep when the steel reinforcement is to remain, and may be deeper when the steel reinforcement is removed with the concrete.

Concrete shall be completely removed (exposing the deformed surface of the bar) from existing steel reinforcing bars which extend from the existing members and are specified to remain. Steel reinforcing bars that are not designated to remain shall be cut a minimum of 1-inch behind the final surface. The void left by removal of the steel reinforcing bar shall be filled with mortar conforming to Section 9-20.4(2). The mortar shall match the color of the existing concrete surface as nearly as practicable.

The Contractor shall roughen, clean, and saturate existing concrete surfaces, against which fresh concrete will be placed, in accordance with Section 6-02.3(12)B. When a portion of existing concrete is to be removed without replacement, concrete shall be removed to a clean line with a smooth surface of less than 1/16 inch profile.

2-02.3(2)A3 Use of Explosives for Bridge Demolition

Explosives shall not be used for bridge demolition, except as specifically allowed by the Special Provisions.

1 **2-02.5 Payment**
2 This section is supplemented with the following new Bid items:
3
4 “Removing Existing Bridge___”, lump sum.
5
6 “Removing Existing Structure___”, lump sum.
7
8 “Removing Portion of Existing Bridge___”, lump sum.
9
10 “Removing Portion of Existing Structure___”, lump sum.
11

12 **Section 2-03, Roadway Excavation and Embankment**
13 **August 4, 2014**

14 **2-03.3(14) Embankment Construction**

15 The third paragraph is revised to read:

16
17 **Hillside Terraces** – The Contractor shall terrace the original ground or embankment
18 when the slope of the surface is 2H:1V or steeper unless otherwise directed by the
19 Engineer. The face of each terrace shall be a minimum of 1 foot and a maximum of 5
20 feet in height and shall be vertical or near vertical as required to remain stable during
21 material placement and compaction. The bench of the terrace shall slope outward to
22 drain and shall not be inclined steeper than 0.05 foot per foot. Terraces damaged
23 during work shall be reestablished. The Engineer may order the Contractor to place
24 gravel backfill, pipe drains or both to drain any seepage.
25

26 **2-03.3(14)L Embankment Widening for Guardrail**

27 The first sentence is revised to read:

28
29 Embankments widened for the installation of beam guardrail shall be terraced in
30 accordance with the requirements for hillside terraces in Section 2-03.3(14).
31

32 The second sentence is deleted.
33

34 **Section 2-09, Structure Excavation**
35 **January 5, 2015**

36 **2-09.4 Measurement**

37 The seventh paragraph is revised to read:

38
39 For pipelines the lower limit in measuring structure excavation will be the foundation
40 level as shown in the Plans or as directed by the Engineer.
41

42 **Section 2-12, Construction Geosynthetic**
43 **January 5, 2015**

44 **2-12.3(4) Permanent Erosion Control and Ditch Lining**

45 In the fourth paragraph, “Section 9-13.2” is revised to read “Section 9-13.1(4)”.

46

AMENDMENTS

1 **Section 3-04, Acceptance of Aggregate**

2 **August 4, 2014**

3 **3-04.5 Payment**

4 In Table 2, the row containing the item “HMA Aggregate” is revised to read:

5

9-03.8(2)	HMA Aggregate						15	15	Uncompacte d Void Content 15
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6

7

8 **Section 5-01, Cement Concrete Pavement Rehabilitation**

9 **August 4, 2014**

10 **5-01.2 Materials**

11 The referenced section for the following item is revised to read:

12

13 Dowel Bars 9-07.5

14

15 **5-01.3(4) Replace Portland Cement Concrete Panel**

16 In the third paragraph, the last sentence is deleted.

17

18 The seventeenth paragraph (beginning with “The Contractor shall place a bond-breaking
19 material...”) is deleted.

20

21 **Section 5-02, Bituminous Surface Treatment**

22 **August 4, 2014**

23 **5-02.3(11) Temporary Raised Pavement Markings**

24 This section’s title is revised to read:

25

26 **Temporary Pavement Markings**

27

28 The word “raised” is deleted from this section.

29

30 **Section 5-04, Hot Mix Asphalt**

31 **January 5, 2015**

32 **5-04.3(3)A Material Transfer Device/Vehicle**

33 The first paragraph is supplemented with the following new sentence:

34

35 At the Contractor’s request the Engineer may approve paving without an MTD/V; the
36 Engineer will determine if an equitable adjustment in cost or time is due.

37

38 In the last sentence of the second paragraph, “Project Engineer” is revised to read
39 “Engineer”.

40

41 **5-04.3(5)A Preparation of Existing Surfaces**

42 The first sentence of the last paragraph is revised to read:

43

AMENDMENTS

1 Unless otherwise approved by the Engineer, the tack coat shall be CSS-1 or CSS-1h
2 emulsified asphalt.

3
4 **5-04.3(7)A3 Commercial Evaluation**

5 The second sentence in the first paragraph is revised to read:

6
7 Mix designs for HMA accepted by commercial evaluation shall be submitted to the
8 Project Engineer on WSDOT Form 350-042.

9
10 **5-04.3(8)A4 Definition of Sampling and Sublot**

11 In the second sentence of the second paragraph, “800 tons” is revised to read “1,000 tons”.

12
13 **5-04.3(10)A General**

14 In the first paragraph, “checking” and “cracking” are deleted.

15
16 In the third paragraph, the following new sentence is inserted after the second sentence:

17
18 Coverage with a steel wheel roller may precede pneumatic tired rolling.

19
20 In the third paragraph, the following new sentence is inserted before the last sentence:

21
22 Regardless of mix temperature, a roller shall not be operated in a mode that results in
23 checking or cracking of the mat.

24
25 **5-04.3(10)B1 General**

26 In this section, “Project Engineer” is revised to read “Engineer”.

27
28 The first paragraph is revised to read:

29
30 HMA mixture accepted by statistical or nonstatistical evaluation that is used in traffic
31 lanes, including lanes for ramps, truck climbing, weaving, and speed change, and
32 having a specified compacted course thickness greater than 0.10-foot, shall be
33 compacted to a specified level of relative density. The specified level of relative density
34 shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in
35 accordance with Section 1-06.2, using a minimum of 91 percent of the maximum
36 density. The percent of maximum density shall be determined by WSDOT FOP for
37 AASHTO T 729 when using the nuclear density gauge and WSDOT SOP 736 when
38 using cores to determine density. The specified level of density attained will be
39 determined by the statistical evaluation of the density of the pavement.

40
41 The following four new paragraphs are inserted after the first paragraph:

42
43 Tests for the determination of the pavement density will be taken in accordance the
44 required procedures for measurement by a nuclear density gauge or roadway cores
45 after completion of the finish rolling.

46
47 If the Contracting Agency uses a nuclear density gauge to determine density the test
48 procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 will be used on the day the
49 mix is placed.

50
51 Roadway cores for density may be obtained by either the Contracting Agency or the
52 Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches

AMENDMENTS

1 unless other approved by the Engineer. Roadway cores will be tested by the
2 Contracting Agency in accordance with WSDOT FOP for AASHTO T 166.
3
4 If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the
5 Contractor in the presence of the Engineer on the same day the mix is placed and at
6 locations designated by the Engineer. If the Contract does not include the Bid item
7 "Roadway Core" the Contracting Agency will obtain the cores.
8
9 In the sixth paragraph (after the preceding Amendments are applied), the second sentence
10 is revised to read:
11
12 Sublots will be uniform in size with a maximum of approximately 100 tons per subplot; the
13 final subplot of the day may be increased to 150 tons.
14
15 **5-04.3(10)B4 Test Results**
16 The first paragraph is revised to read:
17
18 The results of all compaction acceptance testing and the CPF of the lot after three
19 sublots have been tested will be available to the Contractor through WSDOT's website.
20 Determination of the relative density of the HMA with a nuclear density gauge requires a
21 correlation factor and may require resolution after the correlation factor is known.
22 Acceptance of HMA compaction will be based on the statistical evaluation and CPF so
23 determined.
24
25 In the second paragraph, the first sentence is revised to read:
26
27 For a subplot that has been tested with a nuclear density gauge that did not meet the
28 minimum of 91 percent of the reference maximum density in a compaction lot with a
29 CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may
30 request that a core be used for determination of the relative density of the subplot.
31
32 In the second sentence of the second paragraph, "moisture-density" is revised to read
33 "density".
34
35 In the second paragraph, the fourth sentence is deleted.
36
37 **5-04.3(20) Anti-Stripping Additive**
38 This section is revised to read:
39
40 Anti-stripping additive shall be added to the liquid asphalt by the asphalt supplier prior to
41 shipment to the hot mix asphalt mixing plant in the amount designated in the WSDOT
42 mix design evaluation report provided by the Contracting Agency. Paving shall not begin
43 before the anti-strip requirements have been provided to the Contractor. Anti-strip is not
44 required for temporary work that will be removed prior to Completion.
45
46 **5-04.4 Measurement**
47 The following new paragraph is inserted after the first paragraph:
48
49 Roadway cores will be measured per each for the number of cores taken.
50
51 The second to last paragraph is deleted.
52

AMENDMENTS

1 **5-04.5 Payment**
 2 The bid item "Removing Temporary Pavement Marking", per linear foot and paragraph
 3 following bid item are deleted.
 4
 5 The following new bid item is inserted before the second to last paragraph:
 6
 7 "Roadway Core", per each.
 8
 9 The Contractor's costs for all other Work associated with the coring (e.g., traffic control)
 10 shall be incidental and included within the unit Bid price per each and no additional
 11 payments will be made.
 12

13 **Section 5-05, Cement Concrete Pavement**
 14 **August 4, 2014**

15 **5-05.3(1) Concrete Mix Design for Paving**
 16 The second and third rows of the table in item number 3 are revised to read:
 17

Coarse Aggregate	+ 30 Pounds	- 30 Pounds
Fine Aggregate	+ 30 Pounds	- 30 Pounds

18
 19 **5-05.4 Measurement**
 20 The fourth paragraph is supplemented with the following new sentence:
 21
 22 Tie bars with drill holes in cement concrete pavement placed under the Contract will not
 23 be measured.
 24

25 **5-05.5 Payment**
 26 The paragraph following the Bid item "Tie Bar with Drill Hole", per each is supplemented with
 27 the following new sentence:
 28
 29 All costs for tie bars with drill holes in cement concrete pavement placed under the
 30 Contract shall be included in the unit Contract price per cubic yard for "Cement Conc.
 31 Pavement".
 32

33 **Section 6-01, General Requirements for Structures**
 34 **January 5, 2015**

35 **6-01.6 Load Restrictions on Bridges Under Construction**
 36 The first sentence of the second paragraph is revised to read:
 37
 38 If necessary and safe to do so, and if the Contractor requests it through a Type 2E
 39 Working Drawing, the Engineer may allow traffic on a bridge prior to completion.
 40

41 In the second paragraph, item number 3 (up until the colon) is revised to read:
 42
 43 3. Provide stress calculations under the design criteria specified in the AASHTO LRFD
 44 Bridge Design Specifications, current edition, including at a minimum the following:
 45

46 **6-01.9 Working Drawings**
 47 This section is revised to read:

AMENDMENTS

1
2 All Working Drawings required for bridges and other Structures shall conform to Section
3 1-05.3.
4

5 **6-01.10 Utilities Supported by or Attached to Bridges**

6 In the second paragraph, “bridge structures” is revised to read “bridges”.
7

8 **6-01.14 Premolded Joint Filler**

9 In the second paragraph, the first sentence is revised to read:
10

11 The Contractor may substitute for the nails any adhesive acceptable to the Engineer.
12

13 **Section 6-02, Concrete Structures**
14 **January 5, 2015**

15 **6-02.3(1) Classification of Structural Concrete**

16 In paragraph two, item number 1 is revised to read:
17

18 Mix design and proportioning specified in Sections 6-02.3(2), 6-02.3(2)A and 6-
19 02.3(2)A1.
20

21 Item number 3 is renumbered to 4.
22

23 After the preceding Amendments are applied, the following new numbered item is inserted
24 after item number 2:
25

26 3. Temperature and time for placement requirements specified in Section 6-02.3(4)D.
27

28 **6-02.3(2) Proportioning Materials**

29 In the third paragraph, the first sentence is revised to read:
30

31 The use of fly ash is required for Class 4000P concrete, except that ground granulated
32 blast furnace slag may be substituted for fly ash at a 1:1 ratio.
33

34 In the table titled “Cementitious Requirement for Concrete”, the row beginning with “4000D”
35 is deleted.
36

37 The fourth paragraph is revised to read:
38

39 When both ground granulated blast furnace slag and fly ash are included in the
40 concrete mix, the total weight of both these materials is limited to 40 percent by weight
41 of the total cementitious material for concrete class 4000A, and 50 percent by weight of
42 the total cementitious material for all other classes of concrete.
43

44 **6-02.3(2)A Contractor Mix Design**

45 The first paragraph is revised to read:
46

47 The Contractor shall provide a mix design in writing to the Engineer for all classes of
48 concrete specified in the Plans except for lean concrete and commercial concrete. No
49 concrete shall be placed until the Engineer has reviewed the mix design. The required
50 average 28-day compressive strength shall be selected in accordance with ACI 318,
51 Chapter 5, Section 5.3.2. ACI 211.1 and ACI 318 shall be used to determine proportions.

AMENDMENTS

1 All proposed concrete mixes except Class 4000D shall meet the requirements in
2 Cementitious Requirement for Concrete in Section 6-02.3(2).
3
4 In the fourth paragraph, the fourth sentence is deleted.
5
6 In the sixth paragraph, the first sentence is deleted.
7
8 In the seventh paragraph, the last sentence is deleted.
9
10 The eighth paragraph is revised to read:
11
12 Air content for concrete Class 4000D shall conform to Section 6-02.3(2)A1. For all
13 other concrete, air content shall be a minimum of 4.5 percent and a maximum of 7.5
14 percent for all concrete placed above the finished ground line.
15
16 The following new sub-section is added:
17
18 **6-02.3(2)A1 Contractor Mix Design for Concrete Class 4000D**
19 All Class 4000D concrete shall be a project specific performance mix design conforming
20 to the following requirements:
21
22 1. Aggregate shall use combined gradation in accordance with Section 9-03.1(5)
23 with a nominal maximum aggregate size of 1-1/2 inches.
24
25 2. Permeability shall be less than 2,000 coulombs at 56 days in accordance with
26 AASHTO T 277.
27
28 3. Freeze-thaw durability shall be provided by one of the following methods:
29 a. The concrete shall maintain an air content between 4.5 and 7.5 percent.
30 b. The concrete shall maintain a minimum air content that achieves a
31 durability factor of 90 percent, minimum, after 300 cycles in accordance
32 with AASHTO T 161, Procedure A. This air content shall not be less than
33 3.0 percent. Test samples shall be obtained from concrete batches of a
34 minimum of 3.0 cubic yards.
35
36 4. Scaling shall have a visual rating less than or equal to 2 after 50 cycles in
37 accordance with ASTM C 672.
38
39 5. Shrinkage at 28 days shall be less than 320 micro strain in accordance with
40 AASHTO T 160.
41
42 6. Modulus of elasticity shall be measured in accordance with ASTM C 469.
43
44 7. Density shall be measured in accordance with ASTM C 138.
45
46 The Contractor shall submit the mix design in accordance with Section 6-02.3(2)A. The
47 submittal shall include test reports for all tests listed above that follow the reporting
48 requirements of the AASHTO/ASTM procedures. Samples for testing may be obtained
49 from either laboratory or concrete plant batches. If concrete plant batches are used, the
50 minimum batch size shall be 3.0 cubic yards. The Contractor shall submit the mix
51 design to the Engineer at least 30 calendar days prior to the placement of concrete in
52 the bridge deck.

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6-02.3(4)D Temperature and Time For Placement

The first two sentences are revised to read:

Concrete temperatures shall remain between 55°F and 90°F while it is being placed, except that Class 4000D concrete temperatures shall remain between 55°F and 75°F during placement. Precast concrete that is heat cured in accordance with Section 6-02.3(25)D shall remain between 50°F and 90°F while being placed.

6-02.3(5)A General

The first paragraph is revised to read:

Concrete for the following applications will be accepted based on a Certificate of Compliance to be provided by the supplier as described in Section 6-02.3(5)B:

1. Lean concrete.
2. Commercial concrete.
3. Class 4000P concrete for Roadside Steel Sign Support Foundations.
4. Class 4000P concrete for Type II, III, and CCTV Signal Standard Foundations that are 12'-0" or less in depth.
5. Class 4000P concrete for Type IV and V Strain Pole Foundations that are 12'-0" or less in depth.
6. Class 4000P concrete for Steel Light Standard Foundations Types A & B.

The following new sentence is inserted at the beginning of the second paragraph:

Slip-form barrier concrete will be accepted based on conformance to the requirements for temperature, air content and compressive strength at 28 days for sublots as tested and determined by the Contracting Agency.

6-02.3(5)G Sampling and Testing Frequency for Temperature, Consistency, and Air Content

In the fifth sentence of the second paragraph, "five truck loads" is revised to read "ten truck loads".

The second paragraph is supplemented with the following:

If the remaining quantity to be placed is less than ten truck loads; then a sample shall be randomly taken from one of the remaining truck loads.

In the last sentence of the third paragraph, "five truck loads" is revised to read "ten truck loads".

6-02.3(5)H Sampling and Testing for Compressive Strength and Initial Curing

The second paragraph is revised to read:

1 The Contractor shall provide and maintain a sufficient number of cure boxes in
2 accordance with WSDOT FOP for AASHTO T 23 for curing concrete cylinders. The cure
3 boxes shall be readily accessible and no more than 500 feet from the point of
4 acceptance testing, unless otherwise approved by the Engineer. The Contractor shall
5 also provide, maintain and operate all necessary power sources and connections
6 needed to operate the cure boxes. The cure boxes shall be in-place and functioning at
7 the specified temperature for curing cylinders prior to concrete placement. Concrete
8 cylinders shall be cured in the cure boxes in accordance with WSDOT FOP for AASHTO
9 T 23. The cure boxes shall have working locks and the Contractor shall provide the
10 Engineer with one key to each of the locks. Once concrete cylinders are placed in the
11 cure box, the cure box shall not be disturbed until the cylinders have been removed.
12 The Contractor shall retain the cure box Temperature Measuring Device log and provide
13 it to the Engineer upon request.

14
15 The following new paragraph is inserted after the last paragraph:

16
17 All cure box costs shall be incidental to the associated item of work.

18
19 **6-02.3(6)A2 Cold Weather Protection**

20 The first sentence in the first paragraph is revised to read:

21
22 This Specification applies when the weather forecast on the day of concrete placement
23 predicts air temperatures below 35°F at any time during the 7 days following placement.

24
25 The first sentence of the second paragraph is revised to read:

26
27 The temperature of the concrete shall be maintained above 50°F during the entire
28 curing period or 7 days, whichever is greater.

29
30 **6-02.3(10)A Preconstruction Meeting**

31 This section including title is revised to read:

32
33 **6-02.3(10)A Pre-Deck Pour Meeting**

34 A pre-deck pour meeting shall be held 5 to 10 working days before placing deck
35 concrete to discuss construction procedures, personnel, equipment to be used,
36 concrete sampling and testing and deck finishing and curing operations. Those
37 attending shall include, at a minimum, the superintendent, foremen in charge of placing
38 and finishing concrete, and representatives from the concrete supplier and the concrete
39 pump truck supplier.

40
41 If the project includes more than one bridge deck, and if the Contractor's key personnel
42 change between concreting operations, or at request of the Engineer, additional
43 conferences shall be held before each deck placement.

44
45 **6-02.3(10)D Concrete Placement, Finishing, and Texturing**

46 This section is supplemented with the following new sub-sections:

47
48 **6-02.3(10)D1 Test Slab Using Bridge Deck Concrete**

49 After the Contractor receives the Engineer's approval for the Class 4000D concrete mix
50 design, and a minimum of seven calendar days prior to the first placement of bridge
51 deck concrete, the Contractor shall construct a test slab using concrete of the approved
52 mix design.

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The test slab may be constructed on grade, shall have a minimum thickness of eight-inches, shall have minimum plan dimensions of 10-feet along all four edges, and shall be square or rectangular.

During construction of the test slab, the Contractor shall demonstrate concrete sampling and testing, use of the concrete temperature monitoring system, the concrete fogging system, concrete placement system, and the concrete finishing operation. The Contractor shall conduct the demonstration using the same type of equipment to be used for the production bridge decks, except that the Contractor may elect to finish the test slab with a hand-operated strike-board.

After the construction of the test slab and the demonstration of bridge deck construction operations is complete, the Contractor shall remove and dispose of the test slab in accordance with Sections 2-02.3 and 2-03.3(7)C.

6-02.3(10)D2 Preparation for Concrete Placement

Before placing bridge approach slab concrete, the subgrade shall be constructed in accordance with Sections 2-06 and 5-05.3(6).

Before any concrete is placed, the finishing machine shall be operated over the entire length of the deck/slab to check screed deflection. Concrete placement may begin only if the Engineer approves after this test.

Immediately before placing concrete, the Contractor shall check (and adjust if necessary) all falsework and wedges to minimize settlement and deflection from the added mass of the concrete deck/slab. The Contractor shall also install devices, such as telltales, by which the Engineer can readily measure settlement and deflection.

6-02.3(10)D3 Concrete Placement

The placement operation shall cover the full width of the bridge deck or the full width between construction joints. The Contractor shall locate any construction joint over a beam or web that can support the deck/slab on either side of the joint. The joint shall not occur over a pier unless the Plans permit. Each joint shall be formed vertically and in true alignment. The Contractor shall not release falsework or wedges supporting bridge deck placement sections on either side of a joint until each side has aged as these Specifications require.

Placement of concrete for bridge decks and bridge approach slabs shall comply with Section 6-02.3(6). In placing the concrete, the Contractor shall:

1. Place it (without segregation) against concrete placed earlier, as near as possible to its final position, approximately to grade, and in shallow, closely spaced piles;
2. Consolidate it around reinforcing steel by using vibrators before strike-off by the finishing machine;
3. Not use vibrators to move concrete;
4. Not revibrate any concrete surface areas where workers have stopped prior to screeding;

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5. Remove any concrete splashed onto reinforcing steel in adjacent segments before concreting them;
6. Maintain a slight excess of concrete in front of the screed across the entire width of the placement operation;
7. Operate the finishing machine to create a surface that is true and ready for final finish without overfinishing or bringing excessive amounts of mortar to the surface; and
8. Leave a thin, even film of mortar on the concrete surface after the last pass of the finishing machine pan.

Workers shall complete all post screeding operations without walking on the concrete. This may require work bridges spanning the full width of the deck/slab.

After removing the screed supports, the Contractor shall fill the voids with concrete (not mortar).

If the surface left by the finishing machine is porous, rough, or has minor irregularities, the Contractor shall float the surface of the concrete. Floating shall leave a smooth and even surface. Float finishing shall be kept to the minimum number of passes necessary to seal the surface. The floats shall be at least 4-feet long. Each transverse pass of the float shall overlap the previous pass by at least half the length of the float. The first floating shall be at right angles to the strike-off. The second floating shall be at right angles to the centerline of the span. A smooth riding surface shall be maintained across construction joints.

The edge of completed roadway slabs at expansion joints and compression seals shall have a 3/8-inch radius.

After floating, but while the concrete remains plastic, the Contractor shall test the entire deck/slab for flatness (allowing for crown, camber, and vertical curvature). The testing shall be done with a 10-foot straightedge held on the surface. The straightedge shall be advanced in successive positions parallel to the centerline, moving not more than one half the length of the straightedge each time it advances. This procedure shall be repeated with the straightedge held perpendicular to the centerline. An acceptable surface shall be one free from deviations of more than 1/8-inch under the 10-foot straightedge.

If the test reveals depressions, the Contractor shall fill them with freshly mixed concrete, strike off, consolidate, and refinish them. High areas shall be cut down and refinished. Retesting and refinishing shall continue until a surface conforming to the requirements specified above is produced.

6-02.3(10)D4 Monitoring Bridge Deck Concrete Temperature After Placement

The Contractor shall monitor and record the concrete temperature and ambient temperature hourly for seven calendar days after placement. The Contractor shall monitor and record concrete temperature by placing two maturity meter temperature monitoring devices in the bridge deck at locations specified by the Engineer. The Contractor shall monitor ambient temperature using maturity meters near the locations

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1 where concrete temperature is being monitored. When the bridge deck is being
2 enclosed and heated to meet cold weather requirements, ambient temperature readings
3 shall be taken within the enclosure. The Contractor shall submit the concrete
4 temperature and ambient temperature data to the Engineer in spreadsheet format within
5 14 calendar days from placing the bridge deck concrete.
6

7 The Contractor shall submit the type and model of maturity meter temperature
8 monitoring device, and the associated devices responsible for recording and
9 documenting the temperature and curing time, to the Engineer at least 14 calendar days
10 prior to the pre-concreting conference for the first bridge deck to be cast. The
11 placement and operation of the temperature monitoring devices and associated devices
12 will be an agenda item at the pre-concreting conference for the first bridge deck to be
13 cast.
14

15 **6-02.3(10)D5 Bridge Deck Concrete Finishing and Texturing**

16 Except as otherwise specified for portions of bridge decks receiving an overlay or
17 sidewalk under the same Contract, the Contractor shall texture the surface of the bridge
18 deck as follows:
19

20 The Contractor shall texture the bridge deck using diamond tipped saw blades
21 mounted on a power driven, self-propelled machine that is designed to texture
22 concrete surfaces. The grooving equipment shall provide grooves that are 1/8" ±
23 1/64" wide, 3/16" ± 1/16" deep, and spaced at 3/4" ± 1/8". The bridge deck shall
24 not be textured with a metal tined comb.
25

26 The Contractor shall submit the type of grooving equipment to be used to the
27 Engineer for approval 30 calendar days prior to performing the work. The
28 Contractor shall demonstrate that the method and equipment for texturing the
29 bridge deck will not chip, spall or otherwise damage the deck. The Contractor shall
30 not begin texturing the bridge deck until receiving the Engineer's approval of the
31 Contractor's method and equipment.
32

33 Unless otherwise approved by the Engineer, the Contractor shall texture the
34 concrete bridge deck surface either in a longitudinal direction, parallel with
35 centerline or in a transverse direction, perpendicular with centerline. The
36 Contractor shall texture the bridge deck surface to within 3-inches minimum and
37 15-inches maximum of the edge of concrete at expansion joints, within 1-foot
38 minimum and 2-feet maximum of the curb line, and within 3-inches minimum and 9-
39 inches maximum of the perimeter of bridge drain assemblies.
40

41 The Contractor shall contain and collect all concrete dust and debris generated by
42 the bridge deck texturing process, and shall dispose of the collected concrete dust
43 and debris in accordance with Section 2-03.3(7)C.
44

45 If the Plans call for placement of a sidewalk or an HMA or concrete overlay on the
46 bridge deck, the Contractor shall produce the final finish of these areas by dragging a
47 strip of damp, seamless burlap lengthwise over the bridge deck or by brooming it lightly.
48 Approximately 3-feet of the drag shall contact the surface, with the least possible bow in
49 its leading edge. It shall be kept wet and free of hardened lumps of concrete. When the
50 burlap drag fails to produce the required finish, the Contractor shall replace it. When not
51 in use, it shall be lifted clear of the bridge deck.
52

AMENDMENTS

1 After the bridge deck has cured, the surface shall conform to the surface smoothness
2 requirements specified in Section 6-02.3(10)D3.
3
4 The surface texture on any area repaired to address out-of-tolerance surface
5 smoothness shall match closely that of the surrounding bridge deck area at the
6 completion of the repair. Methods used to remove high spots shall cut through the
7 mortar and aggregate without breaking or dislodging the aggregate or causing spalls.
8
9 **6-02.3(10)D6 Bridge Approach Slab Finishing and Texturing**
10 Bridge approach slabs shall be textured either in accordance with Section 6-02.3(10)D5,
11 or using metal tined combs in the transverse direction, except bridge approach slabs
12 receiving an overlay in the same Contract shall be finished as specified in Section 6-
13 02.3(10)D5 only.
14
15 The comb shall be made of a single row of metal tines. It shall leave striations in the
16 fresh concrete approximately 3/16-inch deep by 1/8-inch wide and spaced
17 approximately 1/2-inch apart. The Engineer will decide actual depths at the site. If the
18 comb has not been approved, the Contractor shall obtain the Engineer's approval by
19 demonstrating it on a test section. The Contractor may operate the combs manually or
20 mechanically, either singly or with several placed end to end. The timing and method
21 used shall produce the required texture without displacing larger particles of aggregate.
22
23 Texturing shall end 2-feet from curb lines. This 2-foot untextured strip shall be hand
24 finished with a steel trowel.
25
26 Surface smoothness, high spots, and low spots shall be addressed as specified in
27 Section 6-02.3(10)D5. The surface texture on any area cut down or built up shall match
28 closely that of the surrounding bridge approach slab area. The entire bridge approach
29 slab shall provide a smooth riding surface.
30
31 **6-02.3(10)F Bridge Approach Slab Orientation and Anchors**
32 In the first paragraph, the following sentence is inserted after the first sentence:
33
34 Unless otherwise shown in the Plans, the pavement end of the bridge approach slab
35 shall be constructed normal to the Roadway centerline.
36
37 The following new paragraph is inserted before the last paragraph:
38
39 The compression seal shall be a 2-1/2 inch wide gland selected from the current
40 Qualified Products List.
41
42 **6-02.3(11) Curing Concrete**
43 Items number 1 through 4 are deleted and replaced with the following 5 new numbered
44 items:
45
46 1. Bridge sidewalks, roofs of cut and cover tunnels — curing compound covered by
47 white, reflective type sheeting or continuous wet curing. Curing by either method
48 shall be for at least 10 days.
49
50 2. Bridge decks — See Section 6-02.3(11)B.
51

AMENDMENTS

- 1 3. Bridge approach slabs (Class 4000A concrete) - 2 coats of curing compound and
2 continuous wet cure for at least 10-days.
3
4 4. Concrete barriers and rail bases – See Section 6-02.3(11)A.
5
6 5. All other concrete surfaces — continuous wet cure for at least three days.
7

8 In the second paragraph, the first sentence is replaced with the following three new
9 sentences:

10
11 During the continuous wet cure, the Contractor shall keep all exposed concrete surfaces
12 saturated with water. Formed concrete surfaces shall be kept in a continuous wet cure
13 by leaving the forms in place. If forms are removed during the continuous wet cure
14 period, the Contractor shall treat the concrete as an exposed concrete surface.
15

16 The third paragraph is revised to read:

17
18 When curing Class 4000A, two coats of curing compound that complies with Section 9-
19 23.2 shall be applied immediately (not to exceed 15 min.) after tining any portion of the
20 bridge approach slab. The continuous wet cure shall be established as soon as the
21 concrete has set enough to allow covering without damaging the finish.
22

23 In the fifth paragraph, the first sentence is revised to read:

24
25 If the Plans call for an asphalt overlay on the bridge approach slab, the Contractor shall
26 use the clear curing compound (Type 1, Class B), applying at least 1 gallon per 150
27 square feet to the concrete surface.
28

29 The eighth paragraph is deleted.
30

31 **6-02.3(11)A2 Slip-Form Barrier**

32 In the fourth paragraph, item number 1, “Type 1D” is revised to read “Type 1”.
33

34 **6-02.3(11)B Curing Bridge Decks**

35 This new section is supplemented with the following new sub-sections:
36

37 **6-02.3(11)B1 Equipment**

38 The Contractor shall maintain a wet sheen, without developing pooling or sheeting
39 water, using a fogging apparatus consisting of pressure washers with a minimum nozzle
40 output of 1,500 psi, or other means approved by the Engineer.
41

42 The Contractor shall submit a bridge deck curing plan to the Engineer a minimum 14
43 calendar days prior to the pre-concreting conference. The Contractor’s plan shall
44 describe the sequence and timing that will be used to fog the bridge deck, apply pre-
45 soaked burlap, install soaker hoses and cover the deck with white reflective sheeting.
46

47 **6-02.3(11)B2 Curing**

48 The fogging apparatus shall be in place and charged for fogging prior to beginning
49 concrete placement for the bridge deck.
50

51 The Contractor shall presoak all burlap to be used to cover the deck during curing.
52

AMENDMENTS

1 Immediately after the finishing machine passes over finished concrete, the Contractor
2 shall implement the following tasks:

- 3
- 4 1. The Contractor shall fog the bridge deck while maintaining a wet sheen without
5 developing pooling or sheeting water.
6
 - 7 2. The Contractor shall apply the presoaked burlap to the top surface to fully cover
8 the deck without damaging the finish, other than minor marring of the concrete
9 surface. The Contractor shall not apply curing compound.
10
 - 11 3. The Contractor shall continue to keep the burlap wet by fog spraying until the
12 burlap is covered by soaker hoses and white reflective sheeting. The
13 Contractor shall place the soaker hoses and whiter reflective sheeting after the
14 concrete has achieved initial set. The Contractor shall charge the soaker hoses
15 frequently so as to keep the burlap covering the entire deck wet during the
16 course of curing.
17

18 As an alternative to tasks 2 and 3 above, the Contractor may propose a curing system
19 using proprietary curing blankets specifically manufactured for bridge deck curing.
20 Details of the proprietary curing blanket system, including product literature and details
21 of how the system is to be installed and maintained, shall be submitted to the Engineer
22 for approval.
23

24 The wet curing regime as described shall remain in place for at least 14 consecutive
25 calendar days.
26

27 **6-02.3(12)A Construction Joints in New Construction**

28 The third paragraph is deleted and replaced with the following three new paragraphs:
29

30 If the Plans require a roughened surface on the joint, the Contractor shall strike it off to
31 leave grooves at right angles to the length of the member. Grooves shall be installed
32 using one of the following options:
33

- 34 1. Grooves shall be ½ to 1 inch wide, ¼ to ½ inch deep, and spaced equally at
35 twice the width of the groove. Grooves shall terminate approximately 1 ½-
36 inches from the face of concrete.
37
- 38 2. Grooves shall be 1 to 2 inches wide, a minimum of ½-inch deep, and spaced a
39 maximum of three times the width of the groove. Grooves shall terminate
40 approximately 1 ½-inches from the face of concrete.
41

42 If the Engineer approves, the Contractor may use an alternate method to produce a
43 roughened surface on the joint, provided that such an alternate method leaves a
44 roughened surface of at least a ¼-inch amplitude.
45

46 If the first strike-off does not produce the required roughness, the Contractor shall
47 repeat the process before the concrete reaches initial set. The final surface shall be
48 clean and without laitance or loose material.
49

50 **6-02.3(12)B Construction Joints Between Existing and New Construction**

51 The phrase “by method(s) as approved by the Engineer” is deleted from each paragraph in
52 this section.

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6-02.3(13) Expansion Joints

The first sentence of the second paragraph is revised to read:

Joints made of a vulcanized, elastomeric compound (with neoprene as the only polymer) shall be installed with a lubricant adhesive as recommended by the manufacturer.

In the third paragraph, "injuring" is revised to read "damaging".

The following two new subsections are added:

6-02.3(13)A Strip Seal Expansion Joint System

The Contractor shall submit Working Drawings consisting of the strip seal expansion joint shop drawings in accordance with Section 6-03.3(7). These plans shall include, at a minimum, the following:

1. Plan, elevation, and sections of the joint system and all components, with dimensions and tolerances.
2. All material designations.
3. Manufacturer's written installation procedure.
4. Corrosion protection system used on the metal components.
5. Locations of welded shear studs, lifting mechanisms, temperature setting devices, and construction adjustment devices.
6. Method of sealing the system to prevent leakage of water through the joint.

The strip seal shall be removable and replaceable.

The metal components shall conform to ASTM A 36, ASTM A 992, or ASTM A 572, and shall be protected against corrosion by one of the following methods:

1. Zinc metallized in accordance with Section 6-07.3(14).
2. Hot-dip galvanized in accordance with AASHTO M 111.
3. Paint in accordance with Section 6-07.3(9). The color of the top coat shall be Federal Standard 595 Color No. 26420. The surfaces embedded in concrete shall be painted only with a shop primer coat of paint conforming to Section 9-08.1(2)C.

The strip seal gland shall be continuous for the full length of the joint with no splices permitted, unless otherwise shown in the Plans.

Other than items shown in the Plans, threaded studs used for construction adjustments are the only items that may be welded to the steel shapes provided they are removed by grinding after use, and the area repaired by application of an approved corrosion protection system.

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If the opening between the steel shapes is anticipated to be less than 1-1/2 inches at the time of seal installation, the seal may be installed prior to encasement of the steel shapes in concrete.

After the joint system is installed, the joint shall be flooded with water and inspected, from below the joint, for leakage. If leakage is observed, the joint system shall be repaired by the Contractor, as recommended by the manufacturer.

6-02.3(13)B Compression Seal Expansion Joint System

Compression seal glands shall be selected from the current Qualified Products List and sized as shown in the Plans.

The compression seal expansion joint system shall be installed in accordance with the manufacturer's written recommendations. The Contractor shall submit a Type 1 Working Drawing consisting of the manufacturer's written installation procedure and repair procedures if leakage testing fails.

After the joint system is installed, the joint area shall be flooded with water and inspected, from below the joint, for leakage. If leakage is observed, the joint system shall be repaired by the Contractor, as recommended by the manufacturer.

6-02.3(14) Finishing Concrete Surfaces

The last sentence of the first paragraph is revised to read:

The Contractor shall clean and refinish any stained or discolored surfaces.

The following new subsection is added:

6-02.3(14)D General Requirements for Concrete Surface Finishes Produced by Form Liners

Horizontal and vertical joints shall be spliced in accordance with the manufacturer's printed instructions. The Contractor shall submit a Type 1 Working Drawing consisting of the manufacturer's joint splice instructions.

Horizontal splicing of ABS and plastic form liners to achieve the required height is not permitted and there shall be no horizontal joints. The concrete formed with ABS and plastic form liners shall be given a light sandblast to remove the glossy finish.

Side forms, traffic barrier forms, and pedestrian barrier forms using these form liners may be removed after 24 hours provided the concrete mix used includes a water-reducing admixture, and the concrete reaches 1,400 psi minimum compressive strength before form removal. Concrete in load supporting forms utilizing these form liners shall be cured in accordance with Section 6-02.3(17)N. Once the forms are removed, the Contractor shall treat the joint areas by patching or light sandblasting as required by the Engineer to ensure that the joints are not visible.

Form liners shall be cleaned, reconditioned, and repaired before each use. Form liners with repairs, patches, or defects which, in the opinion of the Engineer, would result in adverse effects to the concrete finish shall not be used.

1 Care shall be taken to ensure uniformity of color throughout the textured surface. A
2 change in form release agent will not be allowed.

3
4 All surfaces formed by the form liner shall also receive a Class 2 surface finish. Form
5 ties shall be a type that leaves a clean hole when removed. All spalls and form tie holes
6 shall be filled as specified for a Class 2 surface finish.

7
8 **6-02.3(14)C Pigmented Sealer for Concrete Surfaces**

9 The first sentence (up until the colon) is revised to read:

10
11 The Contractor shall submit a Type 1 Working Drawing consisting of the pigmented
12 sealer manufacturer's written instructions covering, at a minimum, the following:

13
14 The second paragraph is deleted.

15
16 In the last sentence of the third paragraph, "approval" is revised to read "acceptance".

17
18 **6-02.3(15) Date Numerals**

19 The third sentence in the first paragraph is revised to read:

20
21 When an existing Structure is widened or when traffic barrier is placed on an existing
22 Structure, the date shall be for the year in which the original Structure was completed.

23
24 **6-02.3(16) Plans for Falsework and Formwork**

25 This section is revised to read:

26
27 The Contractor shall submit all plans for falsework and formwork as Type 2E Working
28 Drawings. Submittal is not required for footing or retaining wall formwork if the wall is 4
29 feet or less in height (excluding pedestal height).

30
31 The design of falsework and formwork shall be based on:

- 32
- 33 1. Applied loads and conditions which are no less severe than those described in
34 Section 6-02.3(17)A, Design Loads;
 - 35
36 2. Allowable stresses and deflections which are no greater than those described in
37 Section 6-02.3(17)B, Allowable Stresses and Deflections;
 - 38
39 3. Special loads and requirements no less severe than those described in
40 Section 6-02.3(17)C, Falsework and Formwork at Special Locations;
 - 41
42 4. Conditions required by other Sections of 6-02.3(17), Falsework and Formwork.

43
44 The falsework and formwork plans shall be scale drawings showing the details of
45 proposed construction, including: sizes and properties of all members and components;
46 spacing of bents, posts, studs, wales, stringers, wedges and bracing; rates of concrete
47 placement, placement sequence, direction of placement, and location of construction
48 joints; identification of falsework devices and safe working loads as well as identification
49 of any bolts or threaded rods used with the devices including their diameter, length,
50 type, grade, and required torque. The falsework plans shall show the proximity of
51 falsework to utilities or any nearby Structures including underground Structures.
52 Formwork accessories shall be identified according to Section 6-02.3(17)H, Formwork

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1 Accessories. All assumptions, dimensions, material properties, and other data used in
2 making the structural analysis shall be noted on the drawing.
3
4 The Contractor shall furnish associated design calculations to the Engineer as part of
5 the submittal. The design calculations shall show the stresses and deflections in load
6 supporting members. Construction details which may be shown in the form of sketches
7 on the calculation sheets shall be shown in the falsework or formwork drawings as well.
8 Falsework or formwork plans will be rejected in cases where it is necessary to refer to
9 the calculation sheets for information needed for complete understanding of the
10 falsework and formwork plans or how to construct the falsework and formwork.

11
12 Each sheet of falsework and formwork plans shall carry the following:

- 13
14 1. The initials and dates of all participating design professionals.
- 15
16 2. Clear notation of all revisions including identification of who authorized the
17 revision, who made the revision, and the date of the revision.
- 18
19 3. The Contract number, Contract title, and sequential sheet number. These shall
20 also be on any related documents.
- 21
22 4. Identify where the falsework and formwork plan will be utilized by referencing
23 Contract Plan sheet number and related item or detail.

24
25 **6-02.3(16)A Nonpreapproved Falsework and Formwork Plans**

26 This section, including title, is deleted in its entirety and replaced with the following:

27
28 **6-02.3(16)A Vacant**

29
30 **6-02.3(16)B Preapproved Formwork Plans**

31 This section, including title, is revised to read:

32
33 **6-02.3(16)B Pre-Contract Review of Falsework and Formwork Plans**

34 The Contractor may request pre-contract review of formwork plans for abutments,
35 wingwalls, diaphragms, retaining walls, columns, girders and beams, box culverts,
36 railings, and bulkheads. Plans for falsework supporting the bridge deck for interior
37 spans between precast prestressed concrete girders may also be submitted for pre-
38 contract review.

39
40 To obtain pre-contract review, the Contractor shall electronically submit drawings and
41 design calculations in PDF format directly to:

42
43 BridgeConstructionSupport@wsdot.wa.gov
44

45 The Bridge and Structures Office, Construction Support Engineer will return the
46 falsework or formwork plan to the Contractor with review notes, an effective date of
47 review, and any revisions needed prior to use. For each contract on which the pre-
48 reviewed falsework or formwork plans will be used, the Contractor shall submit a copy
49 to the Engineer. Construction shall not begin until the Engineer has given concurrence.
50

1 If the falsework or formwork being constructed has any deviations to the preapproved
2 falsework or formwork plan, the Contractor shall submit plan revisions for review and
3 approval in accordance with Section 6-02.3(16).
4

5 **6-02.3(17)A Design Loads**

6 The fifth paragraph is revised to read:
7

8 Live loads shall consist of a minimum uniform load of not less than 25 psf, applied over
9 the entire falsework plan area, plus the greater of:

- 10
- 11 1. Actual weights of the deck finishing equipment applied at the rails, or;
 - 12
 - 13 2. A minimum load of 75 pounds per linear foot applied at the edge of the bridge
14 deck.
 - 15

16 **6-02.3(17)J Face Lumber, Studs, Wales, and Metal Forms**

17 The second to last paragraph is deleted.
18

19 **6-02.3(17)O Early Concrete Test Cylinder Breaks**

20 The third paragraph is revised to read:
21

22 The cylinders shall be cured in the field in accordance with WSDOT FOP for AASHTO T
23 Section 10.2 Field Curing.
24

25 **6-02.3(20) Grout for Anchor Bolts and Bridge Bearings**

26 The first five paragraphs are deleted and replaced with the following two new paragraphs:
27

28 Grout shall conform to Section 9-20.3(2) for anchor bolts and for bearing assemblies
29 with bearing plates. Grout shall conform to Section 9-20.3(3) for elastomeric bearing
30 pads and fabric pad bearings without bearing plates.
31

32 Grout shall be a workable mix with a viscosity that is suitable for the intended
33 application. The Contractor shall receive approval from the Engineer before using the
34 grout.
35

36 **6-02.3(24)E Welding Reinforced Steel**

37 This section is revised to read:
38

39 Welding of steel reinforcing bars shall conform to the requirements of ANSI/AWS D1.4
40 Structural Welding Code - Reinforcing Steel, latest edition, except where superseded by
41 the Special Provisions, Plans, and these Specifications.
42

43 Before any welding begins, the Contractor shall submit a Type 2 Working Drawing
44 consisting of the welding procedure for each type of welded splice to be used, including
45 the weld procedure specifications and joint details. The weld procedure specifications
46 shall be written on a form taken from AWS D1.4 Annex A, or equivalent. Test results of
47 tensile strength, macroetch, and visual examination shall be included. The form shall be
48 signed and dated.
49

50 Welders shall be qualified in accordance with AWS D1.4. The Contractor shall be
51 responsible for the testing and qualification of welders, and shall submit Type 2 Working
52 Drawings consisting of welder qualification and retention records. The weld joint and

AMENDMENTS

1 welding position a welder is qualified in shall be in accordance with AWS D1.4. The
2 welder qualifications shall remain in effect indefinitely unless, (1) the welder is not
3 engaged in a given process of welding for which the welder is qualified for a period
4 exceeding six months, or (2) there is some specific reason to question a welder's ability.

5
6 Filler metals used for welding reinforcing bars shall be in accordance with AWS D1.4
7 Table 5.1. All filler metals shall be low-hydrogen and handled in compliance with low-
8 hydrogen practices specified in the AWS code.

9
10 Short circuiting transfer with gas metal arc welding will not be allowed. Slugging of
11 welds will not be allowed.

12
13 For the purpose of compatibility with AWS D1.4, welded lap splices for spiral or hoop
14 reinforcing shall be considered Flare-V groove welds, indirect butt joints.

15
16 The Contractor is responsible for using a welding sequence that will limit the alignment
17 distortion of the bars due to the effects of welding. The maximum out-of-line permitted
18 will be 1/4 inch from a 3.5-foot straight-edge centered on the weld and in line with the
19 bar.

20
21 The ground wire from the welding machine shall be clamped to the bar being welded.

22
23 Where epoxy-coated steel reinforcing bars are specified to be spliced by welding, the
24 epoxy coating shall be left off or removed from the surfaces to be heated, but in no
25 cases less than six inches of each bar being welded. After the welding is complete, the
26 Contractor shall apply epoxy patching material to the uncoated portions of the bar in
27 accordance with Section 6-02.3(24)H.

28
29 **6-02.3(25) Prestressed Concrete Girders**

30 In the first paragraph, the last sentence is revised to read:

31
32 WSDOT certification will be granted at, and renewed during, the annual prestressed
33 plant review and approval process in accordance with WSDOT Materials Manual M 46-
34 01.04 Standard Practice QC 6.

35
36 **6-02.3(25)I Fabrication Tolerances**

37 In the first paragraph, item number 21 is revised to read:

38
39 21. Differential Camber Between Girders in a Span (measured in place at the job
40 site):

41

For deck bulb tee girders and PCPS members with grouted shear keys:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds $\pm \frac{1}{4}$ inch
For deck bulb tee girders and PCPS members without grouted shear keys:	Cambers shall be equalized when the differences in cambers between adjacent girders exceeds $\pm \frac{1}{2}$ inch
For all other prestressed concrete girders:	$\pm \frac{1}{8}$ inch per 10 feet of girder length

42
43 **6-02.3(25)O Deck Bulb Tee Girder Flange Connection**

44 This section, including title, is revised to read:

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Deck Bulb Tee Girder Flange and PCPS Member Connection

The Contractor shall submit a method of equalizing deflections as a Type 1 Working Drawing. Any temporary strands in the top flange shall be cut per Section 6-02.3(25)N prior to equalizing girder deflections.

Deck bulb tee girders and PCPS members with grouted shear keys shall be constructed in the following sequence:

1. Deflections shall be equalized per the Contractor’s equalization plan.
2. Intermediate diaphragms shall be placed and weld ties shall be welded. Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties.
3. The keyways shown in the Plans to receive grout shall be filled flush with the surrounding surfaces using a grout conforming to Section 9-20.3(2).
4. Equalization equipment shall not be removed and other construction equipment shall not be placed on the structure until intermediate diaphragms have attained a minimum compressive strength of 2,500 psi and keyway grout has achieved a minimum compressive strength of 4000 psi.

Deck bulb tee girders and PCPS members without grouted shear keys shall be constructed in the following sequence:

1. Deflections shall be equalized per the Contractor’s equalization plan.
2. Intermediate diaphragms shall be placed and weld ties shall be welded. Welding ground shall be attached directly to the steel plates being welded when welding the weld-ties.
3. Equalization equipment shall not be removed and other construction equipment shall not be placed on the structure until intermediate diaphragms have attained a minimum compressive strength of 2,500 psi.

6-02.3(26)F Prestressing Reinforcement

The last sentence in the fourth paragraph is revised to read:

If the prestressing reinforcement will not be stressed and grouted for more than 7 calendar days after it is placed in the ducts, the Contractor shall place an approved corrosion inhibitor conforming to Federal Specification MIL-I-22110C in the ducts.

6-02.3(28) Precast Concrete Panels

In the first paragraph, the third sentence is revised to read:

WSDOT Certification will be granted at, and renewed during, the annual precast plant review and approval process in accordance with WSDOT Materials Manual M 46-01.04 Standard Practice QC 7.

6-02.4 Measurement

The following three new paragraphs are inserted before the last paragraph:

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1
2 Expansion joint system___ seal - superstr. will be measured by the linear foot along its
3 completed line and slope.
4
5 Expansion joint modification will be measured by the linear foot of expansion joint
6 modified along its completed line and slope.
7
8 Prestressed concrete girder will be measured by the linear foot of girder specified in the
9 Proposal.

10
11 **6-02.5 Payment**

12 In the paragraph following the bid item "Commercial Concrete", per cubic yard the second
13 sentence is revised to read:

14
15 All costs in connection with concrete curing, producing concrete surface finish with form
16 liners, and furnishing and applying pigmented sealer to concrete surfaces as specified,
17 shall be included in the unit contract price per cubic yard for "Conc. Class ____".
18

19 The following new paragraph is inserted after the bid item "Superstructure (name bridge)",
20 lump sum:

21
22 All costs in connection with constructing, finishing and removing the bridge deck test
23 slab as specified in Section 6-02.3(10)D1 shall be included in the lump sum Contract
24 price for "Superstructure___" or "Bridge Deck___" for one bridge in each project, as
25 applicable.
26

27 In the paragraph following the bid item "Epoxy-Coated St. Reinf. Bar ___", per pound, the
28 first sentence is revised to read:

29
30 Payment for reinforcing steel shall include the cost of drilling holes in concrete for, and
31 setting, steel reinforcing bar dowels with epoxy bonding agent, and furnishing,
32 fabricating, placing, and splicing the reinforcement.
33

34 The bid item "Cure Box", lump sum and paragraph following bid item are deleted.
35

36 The following three new bid items are inserted before the bid item "Bridge Approach Slab",
37 per square yard:

38
39 "Expansion Joint System _____ - Superstr.", per linear foot.
40

41 "Expansion Joint Modification - ___", per linear foot.
42

43 "Prestressed Conc. Girder ___", per linear foot.
44

45 **Section 6-03, Steel Structures**
46 **January 5, 2015**

47 **6-03.2 Materials**

48 The first sentence in the fifth paragraph is revised to read:

49
50 The Contractor shall submit Type 1 Working Drawings describing the methods for visibly
51 marking the material so that it can be traced.

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6-03.3(7) Shop Plans

This section is revised to read:

The Contractor shall submit all shop detail plans for fabricating the steel as Type 2 Working Drawings.

If these plans will be submitted directly from the fabricator, the Contractor shall so notify the Engineer in writing.

No material shall be fabricated until: (1) the Working Drawing review is complete, and (2) the Engineer has accepted the materials source.

Before physical completion of the project, the Contractor shall furnish the Engineer one set of reproducible copies of the as-built shop plans. The reproducible copies shall be clear, suitable for microfilming, and on permanent sheets that measure no smaller than 11 by 17-inches. Alternatively, the shop drawings may be provided in an electronic format with the concurrence of the Engineer.

6-03.3(7)A Erection Methods

The first paragraph is revised to read:

Before beginning to erect any steel Structure, the Contractor shall submit Type 2E Working Drawings consisting of the erection plan and procedure describing the methods the Contractor intends to use.

The second paragraph (up until the colon) is revised to read:

The erection plan and procedure shall provide complete details of the erection process including, at a minimum, the following:

The third paragraph (up until the colon) is revised to read:

As part of the erection plan Working Drawings, the Contractor may submit details of an engineered and fabricated lifting bracket bolted to the girder top flanges providing the following requirements are satisfied:

In the third paragraph, the second sentence of item number 4 is revised to read:

Certification documentation from a previous project may be submitted;

The last sentence of the fourth paragraph is deleted.

The last paragraph is deleted.

6-03.3(10) Straightening Bent Material

In the first paragraph, the last sentence is revised to read:

A limited amount of localized heat may be applied only if carefully planned and supervised, and only in accordance with the heat-straightening procedure Working Drawing submittal.

AMENDMENTS

1 The third paragraph is revised to read:

2

3 After straightening, the Contractor shall inspect the member for fractures using a
4 method proposed by the Contractor and accepted by the Contracting Agency.

5

6 The last paragraph is revised to read:

7

8 The procedure for heat straightening of universal mill (UM) plates by the mill or the
9 fabricator shall be submitted as a Type 2 Working Drawing.

10

11 **6-03.3(14) Edge Finishing**

12 In the first paragraph, the last sentence is revised to read:

13

14 Corners along exposed edges shall be broken by light grinding or another method
15 acceptable to the Engineer to achieve an approximate 1/16-inch chamfer or rounding.

16

17 In the fifth paragraph, the last sentence is revised to read:

18

19 The fabricator shall prevent excessive hardening of flange edges through preheating,
20 post heating, or control of the burning process as recommended by the steel
21 manufacturer.

22

23 The sixth paragraph is revised to read:

24

25 Hardness testing shall consist of testing thermal-cut edges with a portable hardness
26 tester. The hardness tester, and its operating test procedures, shall be submitted as a
27 Type 1 Working Drawing. The hardness tester shall be convertible to Rockwell C scale
28 values.

29

30 In the last paragraph, the last sentence is revised to read:

31

32 If thermal-cutting operations conform to procedures established by the steel
33 manufacturer, and hardness testing results are consistently within acceptable limits, the
34 Engineer may authorize a reduction in the testing frequency.

35

36 **6-03.3(15) Planing of Bearing Surfaces**

37 This section is supplemented with the following new paragraph:

38

39 Where mill to bear is specified in the Plans, the bearing end of the stiffener shall be
40 flush and square with the flange and shall have at least 75 percent of this area in
41 contact with the flange.

42

43 **6-03.3(25) Welding and Repair Welding**

44 In the first paragraph, the first sentence is revised to read:

45

46 Welding and repair welding of all steel bridges shall comply with the AASHTO/AWS
47 D1.5M/D1.5, latest edition, Bridge Welding Code.

48

49 In the second paragraph, the last sentence is revised to read:

50

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1 No welding, including tack and temporary welds shall be done in the shop or field unless
2 the location of the welds is shown on the shop drawings reviewed and accepted by the
3 Engineer.

4
5 In the third paragraph, the first sentence is revised to read:

6
7 Welding procedures shall accompany the shop drawing Working Drawing submittal.

8
9 In the fourth paragraph, the first sentence is revised to read:

10
11 Welding shall not begin until completion of the shop plan Working Drawing review as
12 required in Section 6-03.3(7).

13
14 In item number 1 of the ninth paragraph, "approves" is revised to read "concur".

15
16 **6-03.3(25)A3 Ultrasonic Inspection**

17 The following new paragraph is inserted before the last paragraph:

18
19 A minimum of 30 percent of complete penetration vertical welds on steel column jackets
20 thicker than 5/16-inch, within 1.50 column jacket diameter of the top and bottom of each
21 column, shall be inspected. If any rejectable flaws are found, 100 percent of the weld
22 within the specified limits shall be inspected. The largest column cross section diameter
23 for tapered column jackets shall constitute one column jacket diameter.

24
25 **6-03.3(25)A4 Magnetic Particle Inspection**

26 Items number 3 and 4 are revised to read:

- 27
28 3. Complete penetration groove welds on plates $\frac{5}{16}$ -inch or thinner (excluding steel
29 column jackets) shall be 100 percent tested by the magnetic particle method.
30 Testing shall apply to both sides of the weld, if backing plate is not used. The ends
31 of each complete penetration groove weld at plate edges shall be tested by the
32 magnetic particle method.
33
34 4. A minimum of 30 percent of complete penetration vertical welds on steel column
35 jackets $\frac{5}{16}$ -inch or thinner, within 1.50 column jacket diameters of the top and bottom
36 of each column, shall be magnetic particle inspected. The largest column cross
37 section diameter for tapered column jackets shall constitute one column jacket
38 diameter.

39
40 The last paragraph is supplemented with the following new sentence:

41
42 If any rejectable flaws are found in any test length of item 4 above, 100 percent of the
43 weld within the specified limits shall be inspected.

44
45 **6-03.3(27) High Strength Bolt Holes**

46 The last paragraph is revised to read:

47
48 The Contractor shall submit Type 2 Working Drawings consisting of a detailed outline of
49 the procedures proposed to accomplish the work from initial drilling through shop
50 assembly.

51

1 **6-03.3(27)C Numerically Controlled Drilled Connections**

2 In the second paragraph, the first sentence is revised to read:

3

4 The Contractor shall submit Type 1 Working Drawings consisting of a detailed outline of
5 proposed N/C procedures.

6

7 **6-03.3(29) Welded Shear Connectors**

8 This section's content is deleted and replaced with the following:

9

10 Installation, production control, and inspection of welded shear connectors shall
11 conform to Chapter 7 of the AASHTO/AWS D1.5M/D1.5:2010 Bridge Welding Code. If
12 welded shear connectors are installed in the shop, installation shall be completed prior
13 to applying the shop primer coat in accordance with Section 6-07.3(9)G. If welded shear
14 connectors are installed in the field, the steel surface to be welded shall be prepared to
15 SSPC-SP 11, power tool cleaning, just prior to welding.

16

17 **6-03.3(33) Bolted Connections**

18 In the second paragraph, the first sentence is revised to read:

19

20 The Contractor shall submit Type 1 Working Drawings providing documentation of the
21 bolt tension calibrator, including brand, capacity, model, date of last calibration, and
22 manufacturer's instructions for use.

23

24 In the second sentence of the second paragraph, the word "approved" is deleted.

25

26 In item number 3 of the fifth paragraph, "approved" is revised to read "specified".

27

28 In the tenth paragraph, item number 3, "approved" is revised to read "accepted" in the
29 second and third sentences of the first paragraph.

30

31 In the tenth paragraph, item number 3, the third paragraph is revised to read:

32

33 The Contractor shall submit Type 1 Working Drawings of the tension control bolt
34 assembly, including bolt capacities, type of bolt, nut, and washer lubricant, method of
35 packaging and protection of the lubricated bolt, installation equipment, calibration
36 equipment, and installation procedures.

37

38 In the second sentence of the last paragraph, "approved" is revised to read "accepted".

39

40 In the last paragraph, the fourth sentence is revised to read:

41

42 Bolts to be reused shall be relubricated in accordance with the manufacturer's
43 recommendations.

44

45 **6-03.3(33)A Pre-Erection Testing**

46 In the fifth sentence of the first paragraph, "approved" is revised to read "accepted".

47

48 The third paragraph is revised to read:

49

50 The Contractor shall submit Type 1 Working Drawings consisting of the manufacturer's
51 detailed procedure for pre-erection (rotational capacity) testing of tension control bolt
52 assemblies.

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6-03.3(33)B Bolting Inspection

In the last sentence of the first paragraph, “approved” is revised to read “specified”.

The last paragraph is revised to read:

The Contractor shall submit Type 1 Working Drawings consisting of the manufacturer’s detailed procedure for routine observation to ensure proper use of the tension control bolt assemblies.

6-03.3(42) Surface Condition

The first subparagraph is revised to read:

Painted steel surfaces shall be cleaned by methods required for the type of staining. The Contractor shall submit a Type 1 Working Drawing of the cleaning method.

**Section 6-04, Timber Structures
January 5, 2015**

6-04.3(3) Shop Details

This section is revised to read:

The Contractor shall submit Type 2 Working Drawings consisting of shop detail plans for all treated timber. These plans shall show dimensions for all cut, framed, or bored timbers.

**Section 6-05, Piling
January 5, 2015**

6-05.3(2) Ordering Piling

The last paragraph is deleted.

6-05.3(3)A Casting and Stressing

In the second sentence of the first paragraph, “poured” is revised to read “cast”.

6-05.3(4) Manufacture of Steel Casings for Cast-In-Place Concrete Piles

This section is revised to read:

The diameter of steel casings shall be as specified in the Contract. A full-penetration groove weld between welded edges is required.

6-05.3(5) Manufacture of Steel Piles

This section is revised to read:

Steel piles shall be made of rolled steel H-pile sections, steel pipe piles, or of other structural steel sections described in the Contract. A full-penetration groove weld between welded edges is required.

6-05.3(6) Splicing Steel Casings and Steel Piles

This section is revised to read:

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1 The Engineer will normally permit steel piles and steel casings for cast-in-place
2 concrete piles to be spliced. But in each case, the Contractor shall submit Type 2
3 Working Drawings supporting the need and describing the method for splicing. Welded
4 splices shall be spaced at a minimum distance of 10 feet. Only welded splices will be
5 permitted.
6

7 Splice welds for steel piles shall comply with Section 6-03.3(25) and AWS D1.1/D1.1M,
8 latest edition, Structural Welding Code. Splicing of steel piles shall be performed in
9 accordance with an approved weld procedure. The Contractor shall submit a Type 2
10 Working Drawing consisting of the weld procedure. For ASTM A 252 material, mill
11 certification for each lot of pipe to be welded shall accompany the submittal. The ends of
12 all steel pipe piling shall meet the fit-up requirements of AWS D1.1/D1.1M, latest edition,
13 Structural Welding Code Section 5.22.3.1, "Girth Weld Alignment (Tubular)," when the
14 material is spliced utilizing a girth weld.
15

16 Splice welds of steel casings for cast-in-place concrete piles shall be the Contractor's
17 responsibility and shall be welded in accordance with AWS D1.1/D1.1M, latest edition,
18 Structural Welding Code. A weld procedure submittal is not required for steel casings
19 used for cast-in-place concrete piles. Casings that collapse or are not watertight, shall
20 be replaced at the Contractor's expense.
21

22 **6-05.3(7)B Precast Concrete Piles**

23 The second to last sentence of the second paragraph is revised to read:
24

25 The Contractor shall submit Type 2 Working Drawings consisting of the method of lifting
26 the piles.
27

28 **6-05.3(8) Pile Tips and Shoes**

29 In the last paragraph, the second and third sentences are deleted and replaced with the
30 following new sentence:
31

32 If pile tips or shoes other than those denoted in the Qualified Products List are
33 proposed, the Contractor shall submit Type 2 Working Drawings consisting of shop
34 drawings of the proposed pile tip along with design calculations, specifications, material
35 chemistry and installation requirements, along with evidence of a pile driving test
36 demonstrating suitability of the proposed pile tip.
37

38 **6-05.3(9)A Pile Driving Equipment Approval**

39 In the first paragraph, the first sentence is revised to read:
40

41 Prior to driving any piles, the Contractor shall submit Type 2 Working Drawings
42 consisting of details of each proposed pile driving system.
43

44 In the second paragraph, the first sentence is revised to read:
45

46 The Contractor shall submit Type 2E Working Drawings consisting of a wave equation
47 analysis for all pile driving systems used to drive piling with required ultimate bearing
48 capacities of greater than 300 tons.
49

50 In the second paragraph, the second sentence is deleted.
51

52 The last paragraph is revised to read:

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Changes to the pile driving system after completion of the Working Drawing review require a revised Working Drawing submittal.

6-05.3(9)B Pile Driving Equipment Minimum Requirements

In the first paragraph, the first sentence is revised to read:

For each drop hammer used, the Contractor shall weigh it in the Engineer’s presence or submit a Type 1 Working Drawing consisting of a certificate of its weight.

In the third paragraph, the first sentence is revised to read:

For each diesel, hydraulic, steam, or air-driven hammer used, the Contractor shall submit a Type 1 Working Drawing consisting of the manufacturer’s specifications and catalog.

In the fourth paragraph, “approval” is revised to read “permission”.

The ninth paragraph is revised to read:

These requirements for minimum hammer size may be waived if a Type 2E Working Drawing is submitted consisting of a wave equation analysis demonstrating the ability of the hammer to obtain the required bearing capacity and minimum tip elevation without damage to the pile.

6-05.3(9)C Pile Driving Leads

In the third paragraph, “approved” is revised to read “permitted”.

6-05.3(11)F Pile Damage

In the first sentence of the second paragraph, “approved” is revised to read “accepted”.

6-05.3(11)G Pile Cutoff

In the first paragraph, “Engineer’s approval” is revised to read “Engineer’s permission”.

6-05.3(11)H Pile Driving From or Near Adjacent Structures

In the first paragraph, item number 3 is revised to read:

- 3. Type 2E Working Drawings are submitted in accordance with Sections 1-05.3 and 6-02.3(16), showing the structural adequacy of the existing Structure to safely support all of the construction loads.

6-05.3(12) Determination of Bearing Values

In the footnote below the formula, “approved by the Engineer” is revised to read “acceptable to the Engineer”.

6-05.3(13) Treatment of Timber Pile Heads

In the second paragraph, the first sentence is revised to read:

After cutting treated timber piles to correct elevation, the Contractor shall brush three coats of a preservative that meets the requirements of Section 9-09 on all pile heads (except those to be covered with concrete footings or concrete caps).

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1 **6-05.3(15) Completion of Cast-In-Place Concrete Piles**

2 In the first paragraph, "approval" is revised to read "acceptance".

3

4 **Section 6-06, Bridge Railings**

5 **January 5, 2015**

6 **6-06.3(2) Metal Railings**

7 The second paragraph is revised to read:

8

9 Before fabricating the railing, the Contractor shall submit Type 2 Working Drawings
10 consisting of the shop plans. The Contractor may substitute other rail connection details
11 for those shown in the Plans if details of these changes show in the shop plans and if
12 the Engineer accepts them in the Working Drawing response comments. In reviewing
13 the shop plan Working Drawings, the Engineer indicates only that they are adequate
14 and complete enough. The review does not indicate a check on dimensions.

15

16 **Section 6-07, Painting**

17 **January 5, 2015**

18 **6-07.3 Painting**

19 This section is supplemented with the following new subsections:

20

21 **6-07.3(14) Metallic Coatings**

22

23 **6-07.3(14)A General Requirements**

24 This specification covers the requirements for thermal spray metallic coatings, with
25 and without additional paint coats, as a means to prevent corrosion.

26

27 The coating system consists of surface preparation by wash cleaning and abrasive
28 blast cleaning, thermal spray application of a metallic coating using a material
29 made specifically for that purpose, and, when specified, shop primer coat or shop
30 primer coat plus top coat in accordance with Section 6-07.3(11)A. The system also
31 includes inspection and acceptance requirements.

32

33 **6-07.3(14)B Reference Standards**

34	SSPC-SP 10/NACE No. 2	Near White Blast Cleaning
35	SSPC CS 23.00	Guide for Thermal Spray Metallic Coating Systems
36	ASTM-C-633	Standard Test Method for Adhesion or Cohesion
37		Strength of Thermal Spray Coatings
38	ASTM D 4417	Standard Test Methods for Field Measurement of
39		Surface Profile of Blast-Cleaned Steel
40	ASTM D 6386	Standard Practice for Preparation of Zinc (Hot-Dip
41		Galvanized) Coated Iron and Steel Product and
42		Hardware Surfaces for Painting
43	ASTM D 4541	Standard Test Method for Pull-Off Strength of Coatings
44		Using Portable Adhesion Testers
45	ANSI/AWS C2.18	Guide for the Protection of Steel with Thermal Sprayed
46		Coatings of Aluminum, Zinc and their Alloys and
47		Composites
48		

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6-07.3(14)C Quality Assurance

A representative sample of each lot of the coating material used shall be submitted to the Engineer for analysis prior to use. Zinc shall have a minimum purity of 99.9 percent. Zinc Aluminum 85/15 wire shall be 14 percent minimum to 16 percent maximum aluminum.

The thermal sprayed coating shall have a uniform appearance. The coating shall not contain any blisters, cracks, chips or loosely adhering particles, oil or other surface contaminants, nodules, or pits exposing the substrate.

The thermal spray coating shall adhere to the substrate with a minimum bond of 700 psi. The Contractor's QA program shall include thermal spray coating bond testing.

The Engineer may cut through the coating with a knife or chisel. If upon doing so, any part of the coating lifts away from the base metal 1/4 in. or more ahead of the cutting blade without cutting the metal, then the bond is considered not effective and is rejected.

Coated areas which have been rejected or damaged in the inspection procedure described shall have the defective sections blast cleaned to remove all of the thermal sprayed coating and shall then be recoated. Before resubmittal and inspection, those sections where coating has not reached the required thickness shall be sprayed with additional metal until that thickness is achieved.

6-07.3(14)D Submittals

The Contractor shall submit to the Engineer, prior to abrasive blast cleaning, a 12 inch square steel plate, of the same material and approximate thickness of the steel to be coated, blasted clean in accordance with Section 6-07.3(14)E. The sample plate will be checked for specified angular surface pattern, the abrasive grit size and type used, and the procedure used. This plate shall be used as the visual standard to determine the acceptability of the cleaned surface. In the event the Contractor's cleaning operation is inferior to the sample plate, the Contractor shall be required to correct the cleaning operation to do a job comparable to the specimen submitted.

At the same time as submitting the abrasive blast cleaned steel plate sample, the Contractor shall submit to the Engineer, a second 12 inch square steel plate of the same material and thickness, cleaned and thermal spray coated in accordance with the same processes and with the same equipment as intended for use in applying the thermal spray coatings. The Engineer may request additional cleaned and thermal spray coated samples to be produced and submitted coincident with thermal spray coating of the items specified in the Plans to receive thermal spray coatings.

6-07.3(14)E Surface Preparation

Surface irregularities (e.g., sharp edges and/or carburized edges, cracks, delaminations, pits, etc.) interfering with the application of the coating shall be removed or repaired, prior to wash cleaning. Thermal cut edges shall be ground to reduce hardness to attain the surface profile required from abrasive blast cleaning.

- 1 All dirt, oil, scaling, etc. shall be removed prior to blast cleaning. All surfaces shall
2 be wash cleaned with either clean water at 8000 psi or water and detergent at 2000
3 psi with two rinses with clean water.
4
- 5 The surface shall be abrasive blast cleaned to near white metal (SSPC-SP 10).
6 The surface profile shall be measured using a surface profile comparator, replica
7 tape, or other method suitable for the abrasive being used in accordance with
8 ASTM D 4417.
9
- 10 Where zinc coatings up to and including 0.009 inch thick are to be applied, one of
11 the following abrasive grits shall be used with pressure blast equipment to produce
12 a 3.0 mils AA anchor tooth pattern:
13
- 14 1. Aluminum oxide or silicon carbide
15 mesh size: SAE G-25 to SAE G-40
16
 - 17 2. Hardened steel grit
18 mesh size: SAE G-25 to SAE G-40
19
 - 20 3. Garnet, flint, or crushed nickel or black beauty coal slag
21 mesh size: SAE G-25 to SAE G-50
22
- 23 Where zinc coatings greater than 0.010 inch thick are to be applied, one of the
24 following abrasive grits shall be used with pressure blast equipment to produce a
25 5.0 mils AA anchor tooth pattern:
26
- 27 1. Aluminum oxide or silicon carbide
28 mesh size: SAE G-18 to SAE G-25
29
 - 30 2. Hardened steel grit
31 mesh size: SAE G-18 to SAE G-25
32
 - 33 3. Garnet, flint, or crushed nickel or black beauty coal slag
34 mesh size: SAE G-18 to SAE G-25
35
- 36 The pressure of the blast nozzle, as measured with a needle probe gauge, with
37 pressure type blasting equipment shall be as follows:
38
- 39 1. With aluminum oxide, silicon carbide, flint, or slag - 50 psi minimum and 60
40 psi maximum.
41
 - 42 2. With garnet or steel grit - 75 psi minimum.
43
- 44 The pressure at the blast nozzle, with siphon blasting (suction blasting), shall be as
45 follows:
46
- 47 1. With aluminum oxide, silicon carbide, flint, or slag - 75 psi maximum.
48
 - 49 2. With garnet or steel grit - 90 psi maximum.
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The abrasive blast stream shall be directed onto the substrate surface at a spray angle of 75 to 90 degrees, and moved side to side. The nozzle to substrate distance shall be 4 to 12 inches.

6-07.3(14)F Application of Metallic Coating

No surface shall be sprayed which shows any sign of condensed moisture or which does not comply with Section 6-07.3(14)E. If rust bloom occurs within the holding time between abrasive blast cleaning and thermal spraying, the surface shall be reblasted at a blast angle as close to perpendicular to the surface as possible to achieve a 2.0 to 4.0 mil anchor tooth pattern. Thermal spraying shall not take place when the relative humidity is 90% or greater, when the steel temperature is less than 5°F above the dew point, or when the air or steel temperature is less than 40°F.

Clean, dry air shall be used with not less than 50 psi air pressure at the air regulator. Not more than 50 feet of 3/8 in. ID hose shall be used between the air regulator and the metallizing gun. The metallizing gun shall be started and adjusted with the spray directed away from the work. During the spraying operation and depending upon the equipment being used, the gun shall be held as close to perpendicular as possible to the surface from 5 to 8 inches from the surface of the work.

Manual spraying shall be done in a block pattern, typically 2 feet by 2 feet square. The sprayed metal shall overlap on each pass to ensure uniform coverage. The specified thickness of the coating shall be applied in multiple layers. In no case are fewer than two passes of thermal spraying, overlapping at right angles, acceptable.

At least one single layer of coating shall be applied within 4 hours of blasting and the surface shall be completely coated to the specified thickness within 8 hours of blasting.

The minimum coating thickness shall be 6 mils unless otherwise shown in the Plans.

6-07.3(14)G Applications of Shop Coats and Field Coats

The surface shall be wiped clean with solvent immediately before applying the wash primer. The wash primer shall have a low viscosity appropriate for absorption into the thermal spray coating, and shall be applied within 8 hours after completion of thermal spraying or before oxidation occurs. The dry film thickness of the wash primer shall not exceed 0.5 mils or be less than 0.3 mils. It shall be applied using an appropriate spray gun except in those areas where brush or roller application is necessary. The subsequent shop primer or field coats shall be applied no less than one-half hour after a wash primer.

The shop primer coat, when specified, shall be applied in accordance with Section 6-07.3(11)A and the paint manufacturer's recommendations.

All field coats, when specified, shall be applied in accordance with Section 6-07.3(11)A and the paint manufacturer's recommendations. The color of the top coat shall conform to Section 6-03.3(30) as supplemented in these Special Provisions.

1 **6-07.3(2) Submittals**
2 The first paragraph is revised to read:
3
4 The Contractor shall submit Type 2 Working Drawings of the painting plan.
5

6 **6-07.3(10)A Containment**
7 The second paragraph is revised to read:
8

9 The containment length shall not exceed the length of a span (defined as pier to pier).
10 The containment system shall not cause any damage to the existing structure. All
11 clamps and other attachment devices shall be padded or designed such that they shall
12 not mark or otherwise damage the steel member to which they are attached. All clamps
13 and other attachment devices shall be fully described in the Contractor's painting plan
14 Working Drawing submittal. Field welding of attachments to the existing structure will
15 not be allowed. The Contractor shall not drill holes into the existing structure or through
16 existing structural members except as shown in the Contractor's painting plan Working
17 Drawing submittal. All provisions for dust collection, ventilation and auxiliary lighting
18 within the containment system shall be fully described the Contractor's painting plan
19 Working Drawing submittal.
20

21 In the second to last paragraph, "approved" is revised to read "accepted".
22

23 **6-07.3(10)E Surface Preparation – Full Paint Removal**
24 This section is revised to read:
25

26 For structures where full removal of existing paint is specified, the Contractor shall
27 remove any visible oil, grease, and road tar in accordance with SSPC-SP 1.
28

29 Following preparation by SSPC-SP 1, all steel surfaces to be painted shall be prepared
30 in accordance with SSPC-SP 10, near-white metal blast cleaning. Surfaces inaccessible
31 to near-white metal blast cleaning shall be prepared in accordance with SSPC-SP 11,
32 power tool cleaning to bare metal, as allowed by the Engineer.
33

34 **6-07.3(10)F Collecting, Testing and Disposal of Containment Waste**

35 In the first paragraph, the last sentence before the numbered list is revised (up until the
36 colon) to read:
37

38 The sealed waste containers shall be stored in accordance with Section 1-06.4, the
39 painting plan, and the following requirements:
40

41 In the second paragraph, the first sentence is revised to read:
42

43 All material collected by and removed from the containment system shall be taken to a
44 landside staging area, provided by the Contractor, for further processing and storage
45 prior to transporting for disposal.
46

47 The ninth paragraph is revised to read:
48

49 The Contractor shall submit a Type 1 Working Drawing of all TCLP results.
50

51 The first sentence of the last paragraph is revised to read:
52

AMENDMENTS

1 The Contractor shall submit a Type 1 Working Drawing consisting of waste disposal
2 documentation within 15 working days of each disposal.

3
4 **6-07.3(10)K Coating Thickness**

5 The last paragraph is revised to read:

6
7 If the specified number of coats does not produce a combined dry film thickness of at
8 least the sum of the thicknesses required per coat, or if an individual coat does not meet
9 the minimum thickness, or if visual inspection shows incomplete coverage, the coating
10 system will be rejected, and the Contractor shall discontinue painting and surface
11 preparation operations and shall submit a Type 2 Working Drawing of the repair
12 proposal. The repair proposal shall include documentation demonstrating the cause of
13 the less than minimum thickness along with physical test results, as necessary, and
14 modifications to work methods to prevent similar results. The Contractor shall not
15 resume painting or surface preparation operations until receiving the Engineer's
16 acceptance of the completed repair.

17
18 **6-07.3(10)L Environmental Condition Requirements Prior to Application of
19 Paint**

20 In the last paragraph, the second to last sentence is revised to read:

21
22 If a paint system manufacturer's recommendations allow for application of a paint under
23 environmental conditions other than those specified, the Contractor shall submit a Type
24 2 Working Drawing consisting of a letter from the paint manufacturer specifying the
25 environmental conditions under which the paint can be applied.

26
27 In the last sentence of the last paragraph, "approval" is revised to read "concurrence".

28
29 **6-07.3(11)B1 Submittals**

30 The first paragraph (up until the colon) is revised to read:

31
32 The Contractor shall submit Type 2 Working Drawings consisting of the following
33 information:

34
35 **6-07.3(11)B3 Galvanized Surface Cleaning and Preparation**

36 The first paragraph is revised to read:

37
38 Galvanized surfaces receiving the powder coating shall be cleaned and prepared for
39 coating in accordance with ASTM D 6386, and the project-specific powder coating plan.

40
41 **6-07.3(11)B4 Powder Coating Application and Curing**

42 The first paragraph (up until the colon) is revised to read:

43
44 After surface preparation, the two-component powder coating shall be applied in
45 accordance with the powder coating manufacturer's recommendations, the project-
46 specific powder coating plan, and as follows:

47
48 **6-07.3(11)B5 Testing**

49 In the fifth sentence of the first paragraph, the phrase "as approved by the Engineer" is
50 deleted.

51
52 The second paragraph is revised to read:

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The results of the QC testing shall be documented in a QC report, and submitted as a Type 2 Working Drawing.

In the fourth paragraph, the phrase “as approved by the Engineer” is deleted.

In the last paragraph, “Engineer’s approval” is revised to read “Engineer’s acceptance”.

6-07.3(11)B6 Coating Protection for Shipping

The phrase “as approved by the Engineer” is deleted from this section.

The first sentence of the last paragraph is revised to read:

After erection, all coating damage due to the Contractor’s shipping, storage, handling, and erection operations shall be repaired by the Contractor in accordance with the project-specific powder coating plan.

6-07.5 Payment

The following new paragraph is inserted before the last paragraph:

All costs in connection with producing the metallic coatings as specified shall be included in the unit contract price for the applicable item or items of work.

**Section 6-09, Modified Concrete Overlays
January 5, 2015**

6-09.2 Materials

The second sentence of the fifth paragraph is revised to read:

Microsilica will be accepted based on submittal of a Manufacturer’s Certificate of Compliance.

The seventh paragraph is revised to read:

Latex admixture will be accepted based on submittal of a Manufacturer’s Certificate of Compliance.

6-09.3(1)H Mobile Mixer for Latex Modified Concrete

In item number 2 of the first paragraph, “An approved recording meter” is revised to read “A recording meter”.

In item number 3 of the first paragraph, “an approved flow meter” is revised to read “a flow meter”.

6-09.3(1)J Finishing Machine

The last two sentences of the last paragraph are revised to read:

A machine with a vibrating pan as an integral part may be proposed. Other finishing machines will be allowed subject to concurrence of the Engineer.

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6-09.3(2) Submittals

This section is revised to read:

The Contractor shall submit the following Working Drawings in accordance with Section 1-05.3:

1. A Type 1 Working Drawing of the type of machine (rotary milling, hydro-demolition, or shot blasting) selected by the Contractor for use in this project to scarify concrete surfaces.
2. A Type 1 Working Drawing of the axle loads and axle spacing of the rotary milling machine (if used).
3. A Type 2 Working Drawing of the Runoff Water Disposal Plan (if a hydro-demolition machine is used). The Runoff Water Disposal Plan shall describe all provisions for the containment, collection, filtering, and disposal of all runoff water and associated contaminants generated by the hydro-demolition process, including containment, collection and disposal of runoff water and debris escaping through breaks in the bridge deck.
4. A Type 2 Working Drawing of the method and materials used to contain, collect, and dispose of all concrete debris generated by the scarifying process, including provisions for protecting adjacent traffic from flying debris.
5. A Type 1 Working Drawing of the mix design for concrete Class M, and either fly ash modified concrete, microsilica modified concrete, or latex modified concrete, as selected by the Contractor for use in this project in accordance with Section 6-09.3(3).
6. A Type 1 Working Drawing of samples of the latex admixture and the portland cement for testing and compatibility (if latex modified concrete is used).
7. A Type 2 Working Drawing of the paving equipment specifications and details of the screed rail support system, including details of anchoring the rails and providing rail continuity.

6-09.3(3)A General

In the last paragraph, the phrase “and as approved by the Engineer” is deleted.

6-09.3(4)B Latex Admixture

In the second sentence of the second paragraph, the phrase “and as approved by the Engineer” is deleted.

6-09.3(5)A General

The second paragraph is deleted.

In the third and fourth paragraphs, the phrase “and as approved by the Engineer” is deleted.

In the fifth paragraph, “approved by the Engineer” is revised to read “acceptable to the Engineer”.

AMENDMENTS

1 **6-09.3(5)B Testing of Hydro-Demolition and Shot Blasting Machines**
2 In the last sentence of the last paragraph, “approval” is revised to read “acceptance”.

3
4 **6-09.3(5)C Hydro-Demolishing**
5 In the third and fourth paragraphs, the phrase “as approved by the Engineer” is deleted.

6
7 **6-09.3(6)B Deck Repair Preparation**
8 The second to last paragraph is revised to read the following three new paragraphs:

9
10 The exposed steel reinforcing bars and concrete in the repair area shall be sandblasted
11 or hydro-blasted and blown clean just prior to placing concrete.

12
13 Where existing steel reinforcing bars inside deck repair areas show deterioration
14 exceeding the limits defined in the Plans, the Contractor shall furnish and place steel
15 reinforcing bars alongside the deteriorated bars in accordance with the details shown in
16 the Plans. Payment for such extra Work will be by force account as provided in Section
17 1-09.6.

18
19 Bridge deck areas outside the repair area or steel reinforcing bar inside or outside the
20 repair area damaged by the Contractor’s operations, shall be repaired by the Contractor
21 at no additional expense to the Contracting Agency, and to the satisfaction of the
22 Engineer.

23
24 **6-09.3(6)C Placing Deck Repair Concrete**
25 The third paragraph is supplemented with the following:

26
27 The Work of Type 1 further deck preparation shall consist of removing and disposing of
28 the concrete within the repair area.

29
30 The following new sentence is inserted before the last sentence of the last paragraph:

31
32 The Work of Type 2 further deck preparation shall consist of removing and disposing of
33 concrete within the repair area, and furnishing, placing, finishing, and curing the repair
34 concrete.

35
36 **6-09.3(7) Surface Preparation for Concrete Overlay**
37 The first sentence of the second paragraph is revised to read:

38
39 If either a rotary milling machine or a shot blasting machine is used for concrete
40 scarification, then the concrete deck shall be sandblasted or shot blasted, using
41 equipment identified in the Working Drawing submittals, until sound concrete is
42 exposed.

43
44 The third paragraph is revised to read:

45
46 If a hydro-demolition machine is used for concrete scarification, then the concrete deck
47 shall be cleaned by water blasting with 7,000 psi minimum pressure, until sound
48 concrete is exposed.

49
50 In the fourth paragraph, “as approved by the Engineer” is revised to read “accepted by the
51 Engineer”.

52

AMENDMENTS

- 1 In the last sentence of the eighth paragraph, the phrase “as approved by the Engineer” is
2 deleted.
3
- 4 In the first sentence of the last paragraph, “approved” is revised to read “allowed”.
5
- 6 **6-09.3(8)B Quality Assurance for Latex Modified Concrete Overlays**
7 The second sentence of the last paragraph is revised to read:
8
- 9 The technical representative shall be capable of performing, demonstrating, inspecting,
10 and testing all of the functions required for placement of the latex modified concrete as
11 specified in Section 6-09.3(11).
12
- 13 The fourth sentence of the last paragraph is revised to read:
14
- 15 Recommendations made by the technical representative on or off the jobsite shall be
16 adhered to by the Contractor at no additional expense to the Contracting Agency.
17
- 18 **6-09.3(10)A Survey of Existing Bridge Deck Prior to Scarification**
19 The third sentence of the fourth paragraph is revised to read:
20
- 21 A Type 1 Working Drawing of each day's survey record shall be provided to the
22 Engineer within three working days after the end of the shift.
23
- 24 **6-09.3(10)B Establishing Finish Overlay Profile**
25 In the fourth sentence of the first paragraph, “approved by the Engineer” is revised to read
26 “specified by the Engineer”.
27
- 28 In the second paragraph, the phrase “and as approved by the Engineer” is deleted.
29
- 30 **6-09.3(11) Placing Concrete Overlay**
31 In the fourth paragraph, the last sentence of item number 3 is revised to read:
32
- 33 If the Contractor elects to work at night to meet these criteria, adequate lighting shall be
34 provided at no additional expense to the Contracting Agency.
35
- 36 **6-09.4 Measurement**
37 The last paragraph is deleted and replaced with the following:
38
- 39 Further deck preparation for Type 1 deck repair and for Type 2 deck repair will be
40 measured by the square foot of surface area of deck concrete removed in accordance
41 with Section 6-09.3(6).
42
- 43 **6-09.5 Payment**
44 The Bid item “Further Deck Preparation”, per cubic foot and the paragraph following this Bid
45 item are deleted and replaced with the following two new Bid items:
46
- 47 “Further Deck Preparation for Type 1 Deck Repair”, per square foot.
48
- 49 “Further Deck Preparation for Type 2 Deck Repair”, per square foot.
50
- 51 The Bid item “Further Deck Preparation”, force account and the paragraph following this Bid
52 item are deleted.

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Section 6-10, Concrete Barrier
January 5, 2015

6-10.1 Description

In the second paragraph, “approved” is revised to read “specified”.

6-10.3 Construction Requirements

In the first paragraph, “approved” is revised to read “specified”.

6-10.3(5) Temporary Concrete Barrier

The last sentence of the first paragraph is deleted.

The second paragraph is revised to read:

If the Contract calls for the removal and resetting of permanent barrier, and the permanent barrier is not required to remain in place until reset, the permanent barrier may be substituted for temporary concrete barrier. Any of the permanent barrier damaged during its use as temporary barrier will become the property of the Contractor and be replaced with permanent barrier when the permanent barrier is reset to its permanent location.

The third paragraph is revised to read:

All barrier shall be in good condition, without cracks, chips, spalls, dirt, or traffic marks. If any barrier segment is damaged during or after placement, the Contractor shall immediately repair it to the Engineer’s satisfaction or replace it with an undamaged section.

The following new paragraph is inserted after the third paragraph:

Delineators shall be placed on the traffic face of the barrier 6 inches from the top and spaced a maximum of 40 feet on tangents and 20 feet through curves. The reflector color shall be white on the right side of traffic and yellow on the left side of traffic. The Contractor shall maintain, replace and clean the delineators when ordered by the Engineer.

Section 6-11, Reinforced Concrete Walls
January 5, 2015

6-11.3(1) Submittals

The first paragraph is revised to read:

The Contractor shall submit Type 2E Working Drawings consisting of excavation shoring plans in accordance with Section 2-09.3(3)D.

The second paragraph is revised to read:

The Contractor shall submit Type 2E Working Drawings of falsework and formwork plans in accordance with Sections 6-02.3(16) and 6-02.3(17).

The third paragraph (up until the colon) is revised to read:

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If the Contractor elects to fabricate and erect precast concrete wall stem panels, Type 2E Working Drawings of the following information shall be submitted in accordance with Section 6-02.3(28)A:

The last paragraph is deleted.

6-11.3(3) Precast Concrete Wall Stem Panels

In the third paragraph, the phrase “as approved by the Engineer” is deleted.

**Section 6-12, Noise Barrier Walls
January 5, 2015**

6-12.3(1) Submittals

In the first paragraph, the second sentence is revised to read:

The Contractor shall submit a Type 2 Working Drawing consisting of the noise barrier wall access plan.

The second paragraph (up until the colon) is revised to read:

For construction of all noise barrier walls with shafts, the Contractor shall submit a Type 2 Working Drawing consisting of the shaft construction plan, including at a minimum the following information:

In the third paragraph, the first sentence is revised to read:

For construction of precast concrete noise barrier walls, the Contractor shall submit Type 2 Working Drawings consisting of shop drawings for the precast concrete panels in accordance with Section 6-02.3(28)A.

6-12.3(2) Work Access and Site Preparation

In the first paragraph, the first sentence is revised to read:

The Contractor shall construct work access in accordance with the work access plan.

6-12.3(3) Shaft Construction

The first paragraph is revised to read:

The Contractor shall excavate and construct the shafts in accordance with the shaft construction plan.

In the last sentence of the third paragraph, “approved by the Engineer” is revised to read “acceptable to the Engineer”.

The fourth paragraph is revised to read:

When caving conditions are encountered, the Contractor shall stop further excavation until implementing the method to prevent ground caving as specified in the shaft construction plan.

In the last sentence of the fifth paragraph, “approved” is revised to read “accepted”.

AMENDMENTS

- 1
2 In the seventh paragraph, “approval” is revised to read “acceptance”.
3
4 In the eighth paragraph, the third sentence is revised to read:
5
6 The Contractor shall install the steel reinforcing bar cage as specified in the shaft
7 construction plan.
8
9 In the second sentence of the last paragraph, “approval” is revised to read “acceptance”.
10
11 In the fourth sentence of the last paragraph, the word “approved” is deleted.
12
13 **6-12.3(6) Precast Concrete Panel Fabrication and Erection**
14 In item number 3, the second paragraph is revised to read:
15
16 After receiving the Engineer’s review of the shop drawings, the Contractor shall cast
17 one precast concrete panel to be used as the sample panel. The Contractor shall
18 construct the sample panel in accordance with the procedure and details specified in
19 the shop drawings. The Contractor shall make the sample panel available to the
20 Engineer for acceptance.
21
22 In item number 3, the first sentence of the third paragraph is revised to read:
23
24 Upon receiving the Engineer’s acceptance of the sample panel, the Contractor shall
25 continue production of precast concrete panels for the noise barrier wall.
26
27 In item number 3, the third sentence of the third paragraph is revised to read:
28
29 The sample panel shall be retained at the fabrication site until all precast concrete
30 panels have been fabricated and accepted.
31
32 **6-12.3(10) Finish Line Ground Dressing**
33 In the last sentence of the second paragraph, the phrase “as approved by the Engineer” is
34 deleted.
35
36 **Section 6-13, Structural Earth Walls**
37 **January 5, 2015**
38 **6-13.3(1) Quality Assurance**
39 In the first paragraph, the first sentence is revised to read:
40
41 The structural earth wall manufacturer shall provide a qualified and experienced
42 representative to resolve wall construction problems.
43
44 In the first paragraph, the last sentence is revised to read:
45
46 Recommendations made by the structural earth wall manufacturer’s representative shall
47 be followed by the Contractor.
48
49 In the second paragraph, item number 4 is revised to read:
50

AMENDMENTS

1 4. The base of the structural earth wall excavation shall be within three inches of the
2 staked elevations, unless otherwise accepted or specified by the Engineer.
3

4 In the second paragraph, item number 6 is revised to read:
5

6 6. The backfill reinforcement layers shall be located horizontally and vertically within
7 one inch of the locations shown in the structural earth wall working drawings.
8

9 **6-13.3(2) Submittals**

10 In the first paragraph, the first sentence is revised to read:
11

12 The Contractor, or the supplier as the Contractor's agent, shall furnish a Manufacturer's
13 Certificate of Compliance certifying that the structural earth wall materials conform to
14 the specified material requirements.
15

16 The second paragraph is revised to read:
17

18 A Type 1 Working Drawing of all test results, performed by the Contractor or the
19 Contractor's supplier, which are necessary to assure compliance with the specifications,
20 shall submitted along with each Manufacturer's Certificate of Compliance.
21

22 In the third paragraph, the first sentence is revised to read:
23

24 Before fabrication, the Contractor shall submit a Type 1 Working Drawing consisting of
25 the field construction manual for the structural earth walls, prepared by the wall
26 manufacturer.
27

28 In the fourth paragraph, the first sentence is revised to read:
29

30 The Contractor, through the license/patent holder for the structural earth wall system,
31 shall submit Type 2E Working Drawings consisting of detailed design calculations and
32 details.
33

34 The last paragraph is deleted.
35

36 **6-13.3(3) Excavation and Foundation Preparation**

37 In the first paragraph, the last two sentences are revised to read:
38

39 The foundation for the structure shall be graded level for a width equal to or exceeding
40 the length of reinforcing as shown in the structural earth wall working drawings and, for
41 walls with geogrid reinforcing, in accordance with Section 2-12.3. Prior to wall
42 construction, the foundation, if not in rock, shall be compacted as accepted by the
43 Engineer.
44

45 **6-13.3(6) Welded Wire Faced Structural Earth Wall Erection**

46 The first two sentences are revised to read:
47

48 The Contractor shall erect the welded wire wall reinforcement in accordance with the
49 wall manufacturer's field construction manual. Construction geotextile for wall facing
50 shall be placed between the backfill material within the reinforced zone and the coarse
51 granular material immediately behind the welded wire wall facing, as shown in the Plans
52 and the structural earth wall working drawings.

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6-13.3(7) Backfill

The third paragraph is revised to read:

Misalignment or distortion of the precast concrete facing panels or concrete blocks due to placement of backfill outside the limits of this specification shall be corrected in a manner acceptable to the Engineer.

In item number 4 of the fifth paragraph, the phrase “as approved by the Engineer” is deleted.

The last paragraph is deleted.

6-13.3(8) Guardrail Placement

In the first sentence of the second paragraph, “approval” is revised to read “permission”.

6-13.3(9) SEW Traffic Barrier and SEW Pedestrian Barrier

The first paragraph (up until the colon) is revised to read:

The Contractor, in conjunction with the structural earth wall manufacturer, shall design and detail the SEW traffic barrier and SEW pedestrian barrier in accordance with Section 6-12.3(2) and the above ground geometry details shown in the Plans. The barrier Working Drawings and supporting calculations shall be Type 2E and shall include, at a minimum, the following:

**Section 6-14, Geosynthetic Retaining Walls
January 5, 2015**

6-14.2 Materials

In the first paragraph, the section number next to “Anchor rods and associated nuts, washers and couplers” is revised to read:

9-06.5(4)

The following new paragraph is inserted after the first paragraph:

Anchor plate shall conform to ASTM A 36, ASTM A 572 Grade 50, or ASTM A 588.

6-14.3(2) Submittals

The first paragraph (up until the colon) is revised to read:

The Contractor shall submit Type 2 Working Drawings consisting of detailed plans for each wall. As a minimum, the submittals shall include the following:

6-14.3(4) Erection and Backfill

In the second sentence of the second paragraph, “approved by” is revised to read “acceptable to”.

In the last sentence of the fifth paragraph, “approval” is revised to read “permission”.

The sixth paragraph is deleted.

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1 In item number 5 in the eighth paragraph, the phrase “as approved by the Engineer” is
2 deleted.
3
4 In the ninth paragraph, the first sentence is revised to read:
5
6 The Contractor shall construct wall corners at the locations shown in the Plans, and in
7 accordance with the wall corner construction sequence and method in the Working
8 Drawing submittal.
9
10 In the last paragraph, the first sentence is revised to read:
11
12 Where required by retaining wall profile grade, the Contractor shall terminate top layers
13 of retaining wall geosynthetic and backfill in accordance with the method in the Working
14 Drawing submittal.
15
16 **6-14.5 Payment**
17 In the paragraph following the Bid item “Concrete Fascia Panel”, per square foot, “concrete
18 leveling pad” is revised to read “concrete footing”.
19
20 **Section 6-15, Soil Nail Walls**
21 **January 15, 2015**

22 **6-15.3(3) Submittals**
23 The first paragraph (excluding the numbered list) is revised to read:
24
25 The Contractor shall submit Type 2 Working Drawings of the following information:
26
27 **6-15.3(6) Soil Nailing**
28 In the first paragraph, the last sentence is revised to read:
29
30 Damaged or defective encapsulation shall be repaired in accordance with the
31 manufacturer’s recommendations.
32
33 The eighth paragraph is revised to read:
34
35 If sections of the wall are constructed at different times than the adjacent soil nail
36 sections, the Contractor shall use stabilizing berms, temporary slopes, or other
37 measures acceptable to the Engineer, to prevent sloughing or failure of the adjacent soil
38 nail sections.
39
40 **6-15.3(8) Soil Nail Testing and Acceptance**
41 In the first paragraph, the second sentence is revised to read:
42
43 The Contractor shall submit Type 1 Working Drawings of all test data.
44
45 The last sentence of the seventh paragraph is revised to read:
46
47 The Contractor shall submit Type 2E Working Drawings of the reaction frame.
48
49 **6-15.3(8)A Verification Testing**
50 In the third paragraph, the first sentence is revised to read:
51

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1 The Contractor shall submit Type 2E Working Drawings consisting of design details of
2 the verification testing, including the system for distributing test load pressures to the
3 excavation surface and appropriate nail bar size and reaction plate.
4

5 **Section 6-16, Soldier Pile and Soldier Pile Tieback Walls**
6 **January 5, 2015**

7 **6-16.3(2) Submittals**

8 The first paragraph is revised to read:
9

10 The Contractor shall submit Type 2 Working Drawings consisting of shop plans as
11 specified in Section 6-03.3(7) for all structural steel, including the steel soldier piles, and
12 shall submit Type 2 Working Drawings consisting of shop plans and other details as
13 specified in Section 6-17.3(3) for permanent ground anchors.
14

15 The second paragraph is revised to read:
16

17 The Contractor shall submit Type 1 Working Drawings consisting of the permanent
18 ground anchor grout mix design and the procedures for placing the grout.
19

20 The third paragraph (excluding the numbered list) is revised to read:
21

22 The Contractor shall submit Type 2E Working Drawings consisting of forming plans for
23 the concrete fascia panels, as specified in Sections 6-02.3(16) and 6-02.3(17).
24

25 In the fourth paragraph, the first sentence is revised to read:
26

27 The Contractor shall submit Type 2 Working Drawings consisting of a shaft installation
28 plan.
29

30 The last paragraph is deleted.
31

32 **6-16.3(3) Shaft Excavation**

33 In the third paragraph, the last sentence is revised to read:
34

35 A temporary casing, slurry, or other methods specified in the shaft installation plan shall
36 be used if necessary to ensure such safety and stability.
37

38 The fourth paragraph is revised to read:
39

40 Where caving in conditions are encountered, no further excavation will be allowed until
41 the Contractor has implemented the method to prevent ground caving as submitted in
42 accordance with item 4 of the Shaft Installation Plan.
43

44 The sixth paragraph is revised to read:
45

46 The excavated shaft shall be inspected and receive acceptance by the Engineer prior to
47 proceeding with construction.
48

49 **6-16.3(6)B Temporary Lagging**

50 The second paragraph (up until the colon) is revised to read:
51

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1 The Contractor shall submit Type 2E Working Drawings consisting of the soldier pile
2 wall lagging design details and supporting design calculations. The submittal shall
3 include, at a minimum, the following:
4

5 In item number 4 of the second paragraph, "approved by" is revised to read "acceptable to".
6

7 The last paragraph (excluding the table) is revised to read:
8

9 Notwithstanding the requirements of Section 1-06.1, steel materials used by the
10 Contractor as temporary lagging may be salvaged steel provided that the use of such
11 salvaged steel materials shall be subject to visual inspection and acceptance by the
12 Engineer. For salvaged steel materials where the grade of steel cannot be positively
13 identified, the design stresses for the steel shall conform to the Section 6-02.3(17)B
14 requirements for salvaged steel, regardless of whether rivets are present or not.
15

16 **6-16.3(6)D Installing Lagging and Permanent Ground Anchor**

17 In the last sentence of the second paragraph, the phrase "as approved by the Engineer" is
18 deleted.
19

20 In the last sentence of the fourth paragraph, the phrase "as approved by the Engineer" is
21 deleted.
22

23 **6-16.3(8) Concrete Fascia Panel**

24 In the first paragraph, the phrase "as approved by the Engineer" is deleted.
25
26

27 **Section 6-17, Permanent Ground Anchors** 28 **January 5, 2015**

29 **6-17.3(3) Submittals**

30 The first paragraph is revised to read:
31

32 The Contractor shall submit Type 2 Working Drawings consisting of details and
33 structural design calculations for the ground anchor system or systems intended for use.
34

35 The second paragraph is revised to read:
36

37 The Contractor shall submit a Type 1 Working Drawing consisting of a detailed
38 description of the construction procedure proposed for use.
39

40 The third paragraph (up until the colon) is revised to read:
41

42 The Contractor shall submit a Type 2 Working Drawing consisting of ground anchor
43 schedule giving:
44

45 In the fourth paragraph, the first sentence is revised to read:
46

47 The Contractor shall submit a Type 2 Working Drawing detailing the ground anchor
48 tendon and the corrosion protection system.
49

50 In the fourth paragraph, item number 3 is revised to read:
51

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- 1 3. Unbonded length corrosion protection system, including the permanent rubber seal
2 between the trumpet and the tendon unbonded length corrosion protection and the
3 transition between the tendon bond length and the unbonded tendon length
4 corrosion protection.
5

6 The last five paragraphs are deleted and replaced with the following four new paragraphs:
7

8 The Contractor shall submit Type 2 Working Drawings consisting of shop plans as
9 specified in Section 6-03.3(7) for all structural steel, including the permanent ground
10 anchors.
11

12 The Contractor shall submit Type 1 Working Drawings consisting of the mix design for
13 the grout conforming to Section 9-20.3(4) and the procedures for placing the grout. The
14 Contractor shall also submit the methods and materials used in filling the annulus over
15 the unbonded length of the anchor.
16

17 The Contractor shall submit Type 2 Working Drawings consisting of the method
18 proposed to be followed for the permanent ground anchor testing. This shall include all
19 necessary drawings and details to clearly describe the method proposed.
20

21 The Contractor shall submit Type 2 Working Drawings consisting of calibration data for
22 each load cell, test jack, pressure gauge and master pressure gauge to be used. The
23 calibration tests shall have been performed by an independent testing laboratory and
24 tests shall have been performed within 60 calendar days of the date submitted.
25

26 **6-17.3(5) Tendon Fabrication**

27 In the tenth paragraph, the last sentence is deleted.
28

29 The twelfth paragraph is revised to read:
30

31 The total anchor length shall not be less than that indicated in the Plans or the Working
32 Drawing submittal.
33

34 In the last paragraph, the phrase "as approved by the Engineer" is deleted.
35

36 **6-17.3(7) Installing Permanent Ground Anchor**

37 In the second paragraph, the third sentence is revised to read:
38

39 The Contractor's method to prevent ground movement shall be submitted as a Type 2
40 Working Drawing.
41

42 In the second paragraph, the second to last sentence is revised to read:
43

44 At the point of entry the ground anchor shall be installed within plus or minus three
45 degrees of the inclination from horizontal shown in the Plans or the Working Drawing
46 submittal.
47

48 **Section 6-18, Shotcrete Facing** 49 **January 5, 2015**

50 **6-18.3(1) Submittals**

51 In the first paragraph, the first sentence (up until the colon) is revised to read:

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1
2 The Contractor shall submit Type 2 Working Drawings consisting of the following:

3
4 In the first paragraph, item number 2 is revised to read:

5
6 2. Method and equipment used to apply, finish and cure the shotcrete facing.

7
8 The last paragraph is deleted.

9
10 **6-18.3(2) Mix Design**

11 In the first paragraph, the second and third sentences are deleted.

12
13 In the last sentence of the second paragraph, “and approved by the Engineer” is deleted.

14
15 **6-18.3(3)A Preproduction Testing**

16 In the last sentence, “approved” is revised to read “accepted”.

17
18 **6-18.3(7) Shotcrete Application**

19 In the last paragraph, the first sentence is revised to read:

20
21 If field inspection or testing, by the Engineer, indicates that any shotcrete produced, fails
22 to meet the requirements, the Contractor shall immediately modify procedures,
23 equipment, or system, as necessary to produce specification material.

24
25 **Section 6-19, Shafts**
26 **January 5, 2015**

27 **6-19.3(2) Shaft Construction Submittal**

28 The last sentence is revised to read:

29
30 The submittals shall be Type 2 Working Drawings, except the shaft slurry technical
31 assistance submittal shall be Type 1.

32
33 **6-19.3(3) Shaft Excavation**

34 In the first paragraph, the phrase “as approved by the Engineer” is deleted.

35
36 **6-19.3(3)B4 Temporary Telescoping Shaft Casing**

37 In the first paragraph, the first sentence of item number 1 is revised to read:

38
39 The Contractor shall submit the request to use temporary telescoping casing as a Type
40 2 Working Drawing.

41
42 **6-19.3(3)D Bottom of Shaft Excavation**

43 In the first sentence of the second paragraph, “approved” is revised to read “accepted”.

44
45 **6-19.3(3)E Shaft Obstruction**

46 In the last sentence, “approved” is revised to read “accepted”.

47
48 **6-19.3(3)F Voids Between Permanent Casing and Shaft Excavation**

49 In the last sentence, the words “and as approved by the Engineer” are deleted.

50

1 **6-19.3(3)G Operating Shaft Excavation Equipment From an Existing Bridge**

2 The second sentence is revised to read:

3

4 If necessary and safe to do so, and if the Contractor submits a Type 2 Working Drawing
5 consisting of a written request in accordance with Section 6-01.6, the Engineer may
6 permit operation of drilling equipment on a bridge.

7

8 **6-19.3(3)H Seals for Shaft Excavation in Water**

9 The first paragraph is revised to read:

10

11 When shafts are constructed in water and the Plans show a seal between the casing
12 shoring and the upper portion of the permanent casing of the shaft, the Contractor shall
13 construct a seal in accordance with the shaft installation narrative specified in Section 6-
14 19.3(2)B Item 7.

15

16 The last sentence of the last paragraph is revised to read:

17

18 If the Contractor uses a casing shoring diameter other than that specified in the Plans,
19 the Contractor shall submit a revised seal design in accordance with Section 6-19.3(2)B
20 Item 7.

21

22 **6-19.3(4)C Slurry Sampling and Testing**

23 The second to last sentence of the first paragraph is revised to read:

24

25 Synthetic slurry shall conform to Section 9-36.2(2), the quality control plan included in
26 the shaft installation narrative in accordance with Section 6-19.3(2)B Item 4.

27

28 The second sentence of the second paragraph is revised to read:

29

30 These records shall be submitted as a Type 1 Working Drawing once the slurry system
31 has been established in the first drilled shaft on the project.

32

33 **6-19.3(4)E Maintenance of a Stable Shaft Excavation**

34 In the last sentence of the first paragraph, “approval” is revised to read “review”.

35

36 **6-19.3(4)F Disposal of Slurry and Slurry Contacted Spoils**

37 This section is revised to read:

38

39 The Contractor shall manage and dispose of the slurry wastewater in accordance with
40 Section 8-01.3(1)C. Slurry-contacted spoils shall be disposed of as specified in the
41 shaft installation narrative in accordance with Section 6-19.3(2)B, item 8, and in
42 accordance with the following requirements:

43

- 44 1. Uncontaminated spoils in contact with water-only slurry may be disposed of as
45 clean fill.
- 46
- 47 2. Uncontaminated spoils in contact with water slurry mixed with flocculants
48 approved in Section 8-01.3(1)C3 may be disposed of as clean fill away from
49 areas that drain to surface waters of the state.
- 50
- 51 3. Spoils in contact with synthetic slurry or water slurry with polymer-based
52 additives or flocculants not approved in Section 8-01.3(1)C3 shall be disposed

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1 of in accordance with Section 2-03.3(7)C. With permission of the Engineer, the
2 Contractor may re-use these spoils on-site.
3
4 4. Spoils in contact with mineral slurry shall be disposed of in accordance with
5 Section 2-03.3(7)C. With permission of the Engineer, the Contractor may re-use
6 these spoils on-site.
7

8 **6-19.3(5)A Steel Reinforcing Bar Cage Assembly**

9 In the second to last sentence of the first paragraph, the phrase “as approved by the
10 Engineer” is deleted.
11

12 **6-19.3(5)D Steel Reinforcing Bar Cage Support at Base of Shaft Excavation**

13 The first sentence is revised to read:
14

15 For shafts with temporary casing within 15-feet of the bottom of shaft elevation as
16 specified in the Plans, the Contractor may place quarry spalls or other rock backfill
17 acceptable to the Engineer into the shaft below the specified bottom of shaft elevation
18 as a means to support the steel reinforcing bar cage, provided that the materials and
19 means to accomplish this have been addressed by the shaft installation narrative, as
20 specified in Section 6-19.3(2)B Item 9.
21

22 **6-19.3(6)C Care for CSL Access Tubes From Erection Through CSL Testing**

23 In the last sentence, “as approved by the Engineer” is revised to read “acceptable to the
24 Engineer”.
25

26 **6-19.3(8)C Requirements for Leaving Temporary Casing in Place**

27 Item number 1 (up until the colon) is revised to read:
28

29 1. The Contractor shall submit a Type 2E Working Drawing of the following information:
30

31 Item number 2 is deleted.
32

33 **6-19.3(9)D Requirements to Continue Shaft Excavation Prior to Acceptance of
34 First Shaft**

35 This section is revised to read:
36

37 Except as otherwise noted, the Contractor shall not commence subsequent shaft
38 excavations until receiving the Engineer's acceptance of the first shaft, based on the
39 results and analysis of the crosshole sonic log testing for the first shaft. The Contractor
40 may commence subsequent shaft excavations prior to receiving the Engineer's
41 acceptance of the first shaft, provided the following condition is satisfied:
42

43 The Engineer permits continuing with shaft construction based on the Engineer's
44 observations of the construction of the first shaft, including, but not limited to,
45 conformance to the shaft installation narrative in accordance with Section 6-
46 19.3(2)B, and the Engineer's review of Contractor's daily reports and Inspector's
47 daily logs concerning excavation, steel reinforcing bar placement, and concrete
48 placement.
49

50 **6-19.3(9)F Contractor's Investigation and Remedial Action Plan**

51 This section is revised to read:
52

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1 For all shafts determined to be unacceptable, the Contractor shall submit a Type 2
2 Working Drawing consisting of a plan for further investigation or remedial action. All
3 modifications to the dimensions of the shafts, as shown in the Plans, required by the
4 investigation and remedial action plan shall be supported by calculations and working
5 drawings. All investigation and remedial correction procedures and designs shall be
6 submitted.
7

8 **6-19.3(9)H Cored Holes**

9 The first sentence of the second paragraph is revised to read:

10

11 Prior to beginning coring, the Contractor shall submit Type 2 Working Drawings
12 consisting of the method and equipment used to drill and remove cores from shaft
13 concrete.
14

15

15 **Section 8-01, Erosion Control and Water Pollution Control**

16 **January 5, 2015**

17 **8-01.2 Materials**

18 This section is supplemented with the following new paragraph:

19

20 For all seed the Contractor shall furnish the Engineer with the following documentation:

21

- 22 1. The state or provincial seed dealer license and endorsements.
- 23
- 24 2. Copies of Washington State Department of Agriculture (WSDA) test results on
25 each lot of seed. Test results must be within six months prior to the date of
26 application.
27

28

28 **8-01.3(1)A Submittals**

29 The first sentence in the second paragraph is revised to read:

30

31 Modified TESC Plans shall meet all requirements of the current edition of the WSDOT
32 Temporary Erosion and Sediment Control Manual M 3109.
33

34

34 **8-01.3(1)C Water Management**

35 Items number 1 through 3 are deleted.

36

37 This section is supplemented with the following new subsections:

38

39 **8-01.3(1)C1 Disposal of Dewatering Water**

40 When uncontaminated groundwater with a pH range of 6.5 – 8.5 is encountered in an
41 excavation, it may be disposed of as follows:
42

43

- 44 1. When the turbidity of the groundwater is 25 NTU or less, it may bypass
45 detention and treatment facilities and be discharged into the stormwater
46 conveyance system at a rate that will not cause erosion or flooding in the
47 receiving surface water body.
- 48 2. When the turbidity of the groundwater is not more than 25 NTU above or 125%
49 of the turbidity of the site stormwater runoff, whichever is greater, the same
50 detention and treatment facilities as used to treat the site runoff may be used.

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3. When the turbidity of the groundwater is more than 25 NTU above or 125% of the turbidity of the site stormwater runoff, whichever is greater, the groundwater shall be treated separately from the site stormwater.

Alternatively, the Contractor may pursue independent disposal and treatment alternatives that do not use the stormwater conveyance system.

8-01.3(1)C2 Process Wastewater

Wastewater generated on-site as a byproduct of a construction process shall not be discharged to surface waters of the State. Some sources of process wastewater may be infiltrated in accordance with the NPDES Construction Stormwater General Permit.

8-01.3(1)C3 Shaft Drilling Slurry Wastewater

Wastewater generated on-site during shaft drilling activity shall be managed and disposed of in accordance with the requirements below. No shaft drilling slurry wastewater shall be discharged to surface waters of the State. Neither the sediment nor liquid portions of the shaft drilling slurry wastewater shall be contaminated, as detectable by visible or olfactory indication (e.g., chemical sheen or smell).

1. Water-only shaft drilling slurry or water slurry with approved flocculants may be infiltrated on-site. Flocculants used shall meet the requirements of Section 9-14.5(1) or shall be chitosan products listed as General Use Level Designation (GULD) on the Department of Ecology's stormwater treatment technologies webpage for construction treatment. Infiltration is permitted if the following requirements are met:
 - a. Wastewater shall have a pH of 6.5 – 8.5 prior to discharge.
 - b. The source water meets drinking water standards or the Groundwater Quality Criteria listed in WAC 173-200-040.
 - c. The amount of flocculant added to the slurry shall be kept to the minimum needed to adequately settle out solids. The flocculant shall be thoroughly mixed into the slurry.
 - d. Infiltration locations shall be at least 100 feet away from surface waters, wells, on-site sewage systems, aquifer-sensitive recharge areas, sole source aquifers, and well-head protection areas. Before infiltration begins, there shall be a minimum of 5 feet of unsaturated soil between the soil surface receiving the wastewater for infiltration and the groundwater surface (i.e., saturated soil).
 - e. The slurry removed from the shaft shall be contained in a leak proof cell or tank for a minimum of 3 hours.
 - f. Within a 24 hour period, a maximum of 21,000 gallons of slurry wastewater may be infiltrated in an infiltration location. The infiltration rate shall be reduced if needed to prevent wastewater from leaving the infiltration location. The infiltration site shall be monitored regularly during infiltration activity. All wastewater discharged to the ground must fully infiltrate and discharges must stop before the end of each work day.

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- g. After infiltration activity is complete, loose sediment in the infiltration location that may have resulted from the infiltration activity or the removal of BMPs used to manage infiltration activity shall be stabilized to prevent mobilization by stormwater runoff.
- h. Drilling spoils and settled sediments remaining in the containment cell or tank shall be disposed of in accordance with Section 6-19.3(4)F.
- i. Infiltration locations shall be marked on the on-site temporary erosion and sediment control (TESC) plan sheets before the infiltration activity begins.
- j. Prior to infiltrating water-only shaft drilling slurry or water slurry with approved flocculants, the Contractor shall submit a Shaft Drilling Slurry Wastewater Management and Infiltration Plan as a Type 2 Working Drawing. This Plan shall be kept on-site, adapted if needed to meet the construction requirements, and updated to reflect what is being done in the field. The Working Drawing shall include, at a minimum, the following information:
 - i. Plan sheet showing the proposed infiltration location and all surface waters, wells, on-site sewage systems, aquifer-sensitive recharge areas, sole source aquifers, and well-head protection areas within 150 feet.
 - ii. The proposed elevation of soil surface receiving the wastewater for infiltration and the anticipated phreatic surface (i.e., saturated soil).
 - iii. The source of the water used to produce the slurry.
 - iv. The estimated total volume of wastewater to be infiltrated.
 - v. The approved flocculant to be used (if any).
 - vi. The controls or methods (e.g., trenches, traps, berms, silt fence, dispersion, or discharge metering devices) that will be used to prevent surface wastewater runoff from leaving the infiltration location. The Working Drawing shall include all pertinent design details (e.g., sizing of trenches or traps, placement or height of berms, application techniques) needed to demonstrate the proposed controls or methods are adequate to prevent surface wastewater runoff from leaving the infiltration location.
 - vii. The strategy for removing slurry wastewater from the shaft and containing the slurry wastewater once it has been removed from the shaft.
 - viii. The strategy for monitoring infiltration activity and adapting methods to ensure compliance.

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- ix. A contingency plan that can be implemented immediately if it becomes evident that the controls in place or methods being used are not adequate.
 - x. The strategy for cleaning up the infiltration location after the infiltration activity is done. Cleanup shall include stabilizing any loose sediment on the surface within the infiltration area generated as a byproduct of suspended solids in the infiltrated wastewater or soil disturbance associated with BMP placement and removal.
2. Shaft drilling mineral slurry, synthetic slurry, or slurry with polymer additives not approved for infiltration shall be contained and disposed of by the Contractor at an approved disposal facility in accordance with Section 2-03.3(7)C. Spoils that have come into contact with mineral slurry shall be disposed of in accordance with Section 6-19.3(4)F.

8-01.3(1)C4 Management of Off-Site Water

Prior to disruption of the normal watercourse, the Contractor shall intercept the off-site surface water and pipe it either through or around the project site. This water shall not be combined with on-site stormwater. It shall be discharged at its preconstruction outfall point in such a manner that there is no increase in erosion below the site. The Contractor shall submit a Type 2 Working Drawing consisting of the method for performing this Work.

8-01.3(2)A Preparation for Application

This section's content is deleted and replaced with the following two new subsections:

8-01.3(2)A1 Seeding

Areas to be cultivated are shown in the Plans or specified in the Special Provisions. The areas shall be cultivated to the depths specified to provide a reasonably firm but friable seedbed. Cultivation shall take place no sooner than 2 weeks prior to seeding.

All areas to be seeded, including excavated slopes shall be compacted and prepared unless otherwise specified or ordered by the Engineer. A cleated roller, crawler tractor, or similar equipment that forms longitudinal depressions at least 2 inches deep shall be used for compaction and preparation of the surface to be seeded.

The entire area shall be uniformly covered with longitudinal depressions formed perpendicular to the natural flow of water on the slope. The soil shall be conditioned with sufficient water so the longitudinal depressions remain in the soil surface until completion of the seeding.

Prior to seeding, the finished grade of the soil shall be 1 inch below the top of all curbs, junction and valve boxes, walks, driveways, and other Structures. The soil shall be in a weed free and bare condition.

All bags of seed shall be brought to the site in sealed bags and shall have seed labels attached showing the seed meets the Specifications. Seed which has become wet, moldy, or otherwise damaged in transit or storage will not be accepted.

1 **8-01.3(2)A2 Temporary Seeding**

2 A cleated roller, crawler tractor, or similar equipment that forms longitudinal depressions
3 at least 2 inches deep shall be used for compaction and preparation of the surface to be
4 seeded. The entire area shall be uniformly covered with longitudinal depressions formed
5 perpendicular to the natural flow of water on the slope. The soil shall be conditioned with
6 sufficient water so the longitudinal depressions remain in the soil surface until
7 completion of the seeding.
8

9 **8-01.3(2)B Seeding and Fertilizing**

10 In the list in the second paragraph, item numbers 1-5 are revised to read:

11

12 1. A hydro seeder that utilizes water as the carrying agent, and maintains continuous
13 agitation through paddle blades. It shall have an operating capacity sufficient to
14 agitate, suspend, and mix into a homogeneous slurry the specified amount of seed
15 and water or other material. Distribution and discharge lines shall be large enough to
16 prevent stoppage and shall be equipped with a set of hydraulic discharge spray
17 nozzles that will provide a uniform distribution of the slurry.

18

19 2. Blower equipment with an adjustable disseminating device capable of maintaining a
20 constant, measured rate of material discharge that will ensure an even distribution of
21 seed at the rates specified.

22

23 3. Helicopters properly equipped for aerial seeding.

24

25 4. Power-drawn drills or seeders.

26

27 5. Areas in which the above methods are impractical may be seeded by hand
28 methods.

29

30 **8-01.3(2)C Liming**

31 This section including title is deleted in its entirety and replaced with the following:

32

33 **8-01.3(2)C Vacant**

34

35 **8-01.3(2)D Mulching**

36 The first sentence of the second paragraph is revised to read:

37

38 Distribution of straw mulch material shall be by means that utilizes forced air to blow
39 mulch material on seeded areas.

40

41 **8-01.3(11) Outlet Protection**

42 In the last sentence, "Section 9-13.6" is revised to read "Section 9-13.1(5)".

43

44 **8-01.4 Measurement**

45 In the twelfth paragraph, "liming" is deleted.

46

47 **8-01.5 Payment**

48 The bid item "Liming", per acre is deleted.

49

AMENDMENTS

1 **Section 8-02, Roadside Restoration**

2 **January 5, 2015**

3 **8-02.3(1) Responsibility During Construction**

4 The last sentence of the second paragraph is revised to read:

5

6 This Work shall include keeping the planted and seeded areas free from insect
7 infestation, weeds or unwanted vegetation, litter, and other debris along with retaining
8 the finished grades and mulch in a neat uniform condition.

9

10 **8-02.3(2) Roadside Work Plan**

11 This section's title is revised to read:

12

13 **Work Plans**

14

15 This section's content is deleted in its entirety and replaced with the following new
16 subsections:

17

18 **8-02.3(2)A Roadside Work Plan**

19 Before starting any Work that disturbs the earth and as described in Sections 8-01, 8-02
20 and 8-03, the Contractor shall submit a roadside work plan. The roadside work plan
21 shall be submitted as a Type 1 Working Drawing and shall define the Work necessary to
22 provide all Contract requirements, including: wetland excavation, soil preparation,
23 habitat structure placement, planting area preparation, seeding area preparation, bark
24 mulch and compost placement, seeding, planting, plant replacement, irrigation, and
25 weed control in narrative form.

26

27 The Roadside Work Plan shall also include a copy of the approved progress schedule.

28

29 **8-02.3(2)B Weed and Pest Control Plan**

30 The Weed and Pest Control Plan shall be submitted as a Type 1 Working Drawing. The
31 weed and pest control plan shall include scheduling and methods of all control
32 measures required under the Contract or proposed by the Contractor including soil
33 preparation methods to meet the required soil surface conditions in the planting, bark
34 mulch, and wetland areas. The weed control plan shall show general weed control
35 including hand, mechanical and chemical methods, timing, application of herbicides
36 including type, rate, use and timing, mowing, and noxious weed control. Target weeds
37 and unwanted vegetation to be removed shall be identified and listed in the weed
38 control plan.

39

40 The plan shall be prepared and signed by a licensed Commercial Pest Control Operator
41 or Consultant when chemical pesticides are proposed. The plan shall include methods
42 of weed control; dates of weed control operations; and the name, application rate, and
43 Material Safety Data Sheets of all proposed herbicides. In addition, the Contractor shall
44 furnish the Engineer with a copy of the current product label for each pesticide and
45 spray adjuvant to be used. These product labels shall be submitted with the weed
46 control plan for approval.

47

48 **8-02.3(2)C Plant Establishment Plan**

49 The Plant Establishment Plan shall be prepared in accordance with the requirements of
50 Section 8-02.3(13) and submitted as a Type 1 Working Drawing. The Plan shall show

AMENDMENTS

1 the proposed scheduling of activities, materials, equipment to be utilized for the first-
2 year plant establishment, and an emergency contact person. The Plan shall include the
3 management of the irrigation system, when applicable. Should the plan become
4 unworkable at any time during the first-year plant establishment, the Contractor shall
5 submit a revised plan prior to proceeding with further Work.
6

7 **8-02.3(3) Weed and Pest Control**

8 This section is supplemented with the following new paragraph:
9

10 Grass, including grass applied in accordance with Section 8-01, growing within the
11 mulch ring of a plant shall be considered a weed and be controlled on the project in
12 accordance with the weed and pest control plan.
13

14 **8-02.3(4) Topsoil**

15 The last sentence of the first paragraph is revised to read:
16

17 After the topsoil has been spread, all large clods, hard lumps, and rocks 2 inches in
18 diameter and larger, and litter shall be raked up, removed, and disposed of by the
19 Contractor.
20

21 The following new paragraph is inserted after the first paragraph:
22

23 Topsoil stockpiled for project use shall be protected to prevent erosion and weed
24 growth. Weed growth on topsoil stockpile sites shall be immediately eliminated in
25 accordance with the approved Weed and Pest Control Plan.
26

27 **8-02.3(4)C Topsoil Type C**

28 The last sentence is revised to read:
29

30 Topsoil Type C shall meet the requirements of Sections 8-02.3(4), 8-02.3(4)B, and 9-
31 14.1(3).
32

33 **8-02.3(12) Completion of Initial Planting**

34 Item number 4 in the last paragraph is deleted.
35

36 **8-02.3(13) Plant Establishment**

37 The first sentence of the second paragraph is deleted.
38

39 The second paragraph is supplemented with the following new sentence:
40

41 The 1 calendar year shall be extended an amount equal to any periods where the
42 Contractor does not comply with the plant establishment plan.
43

44 The first sentence of the fourth paragraph is revised to read:
45

46 During the first year of plant establishment under PSIFE (Plant Selection Including Plant
47 Establishment), the Contractor shall meet monthly with the Engineer for the purpose of
48 joint inspection of the planting material on a mutually agreed upon schedule.
49

50 The last two paragraphs are deleted.
51

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1 **8-02.4 Measurement**
2 This section is supplemented with the following:
3
4 Plant selection will be measured per each.
5
6 PSIFE __ (Plant Selection Including Plant Establishment) will be measured per each.
7
8 **8-02.5 Payment**
9 The paragraph following the bid item "Topsoil Type ____", per acre is revised to read:
10
11 The unit Contract price per acre for "Topsoil Type ____" shall be full payment for all
12 costs for the specified Work.
13
14 The bid item "PSIFE ____", per each and the paragraph following the bid item are revised to
15 read:
16
17 "PSIFE ____", per each.
18
19 The unit Contract price for "Plant Selection ____", per each, and "PSIFE ____", per each,
20 shall be full pay for all Work necessary for weed control within the planting area,
21 planting area preparation, fine grading, planting, cultivating, plant storage and
22 protection, fertilizer and root dip, staking, cleanup, and water necessary to complete
23 planting operations as specified to the end of first year plant establishment.
24
25 The bid item "Plant Establishment - ____ Year" is deleted.
26
27 **Section 8-04, Curbs, Gutters, and Spillways**
28 **January 5, 2015**
29
30 **8-04.2 Materials**
31 The referenced section for the following item is revised to read:
32
33 Hand Placed Riprap 9-13.1(4)
34
35 **8-04.3(1) Cement Concrete Curbs, Gutters, and Spillways**
36 The first sentence in the fourth paragraph is revised to read:
37
38 Expansion joints in the curb or curb and gutter shall be spaced as shown in the Plans,
39 and placed at the beginning and ends of curb returns, drainage Structures, bridges, and
40 cold joints with existing curbs and gutters.
41
42 In the third sentence of the fourth paragraph, "1/4-inch" is revised to read "3/8-inch".
43
44 **8-04.3(1)A Extruded Cement Concrete Curb**
45 The second sentence in the second paragraph is revised to read:
46
47 Cement concrete curbs shall be anchored to the existing pavement by placing steel
48 reinforcing bars 1 foot on each side of every joint.
49
50 The third paragraph is revised to read:
51
52 Steel reinforcing bars shall meet the dimensions shown in the Standard Plans.

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Section 8-09, Raised Pavement Markers
April 7, 2014

8-09.3(6) Recessed Pavement Marker

The following sentence is inserted after the first sentence of the first paragraph:

The Contractor shall ensure that grinding of the pavement does not result in any damage, (e.g. chipping, spalling or raveling) to the pavement to remain.

Section 8-11, Guardrail
April 7, 2014

8-11.3(1) Beam Guardrail

After the below Amendments to 8-11.3(1)F and 8-11.3(1)G are applied, this section is supplemented with the following new sub-section:

8-11.3(1)F Removing and Resetting Beam Guardrail

The Contractor shall remove and reset existing guardrail posts, rail element, hardware and blocks to the location shown in the Plans. The mounting height of reset rail element shall be at the height shown in the Plans. The void caused by the removal of the post shall be backfilled and compacted.

The Contractor shall remove and replace any existing guardrail posts and blocks that are not suited for re-use, as staked by the Engineer. The void caused by the removal of the post shall be backfilled and compacted. The Contractor shall then furnish and install a new guardrail post to provide the necessary mounting height.

8-11.3(1)A Erection of Posts

The second paragraph in this section is deleted.

8-11.3(1)C Terminal and Anchor Installation

The last sentence in the last paragraph is deleted.

8-11.3(1)F Plans

This section number is revised to:

8-11.3(1)G

8-11.3(1)G Guardrail Construction Exposed to Traffic

This section number is revised to:

8-11.3(1)H

Section 8-18, Mailbox Support
August 4, 2014

8-18.3(1) Type 3 Mailbox Support

In the third paragraph, the first sentence is revised to read:

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1 With the Engineer's consent, a Type 3 Mailbox Support design, made of steel or other
2 durable material, that meets the NCHRP 350 or the Manual for Assessing Safety
3 Hardware (MASH) crash test criteria may be used in place of the design shown in the
4 *Standard Plans*.

5
6 **Section 8-20, Illumination, Traffic Signal Systems, Intelligent Transportation**
7 **Systems, and Electrical**
8 **January 5, 2015**

9 **8-20.2(1) Equipment List and Drawings**

10 The fifth paragraph is revised to read:

11

12 The Contractor will not be required to submit shop drawings for approval for light
13 standards and traffic signal standards conforming to the preapproved plans listed in the
14 Special Provisions. The Contractor may use preapproved plans posted on the WSDOT
15 website with a more current revision date than published in the Special Provisions.

16

17 **8-20.3(1) General**

18 The following six new paragraphs are inserted after the second paragraph:

19

20 If a portion of an existing communication conduit system is damaged due to the
21 Contractor's activities, the affected system shall be restored to original condition.
22 Conduit shall be repaired. Communication cables shall be replaced and the
23 communication system shall be made fully operational within 24 hours of being
24 damaged.

25

26 Damaged communication cable shall be replaced between existing termination or splice
27 points. No additional termination or splice points will be allowed. An existing
28 termination or splice point is defined as a location where all existing fiber strands or
29 twisted pair wires are terminated or spliced at one point. Communication cable shall be
30 defined as either copper twisted pair or fiber optic cables. The Contractor may use
31 temporary splices to restore Contracting Agency communication systems until the
32 permanent communication cable system is restored.

33

34 When damage to an existing communication system has occurred, the Contractor shall
35 perform the following in addition to other restoration requirements:

36

- 37 1. Inspect the communication raceway system including locate wire or tape to
38 determine the extent of damage.
- 39
- 40 2. Contact the Engineer for Fiber Optic Cable and Twisted Pair (TWP) Copper
41 Cable acceptance testing requirements and communication system restoration
42 requirements.
- 43
- 44 3. Initially perform the acceptance tests to determine the extent of damage and
45 also perform the acceptance tests after repairs are completed. Provide written
46 certification that the communication cable system, including the locate wire or
47 tape, is restored to test standard requirements.

48

49 Communication cables shall be restored by Contractor personnel that are WSDOT
50 prequalified for communication installation work. Restoration shall be considered
51 electrical work when the path of the communication system interfaces with electrical

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1 systems. Electrical work of this nature shall be performed by Contractor personnel that
2 are WSDOT prequalified for work on both electrical and communication systems.
3
4 If the Contractor or Subcontractors are unable or unqualified to complete the restoration
5 work, the Engineer may have the communication or electrical systems restored by other
6 means and subtract the cost from the money that will be or is due the Contractor.
7
8 When field repair of existing conduit, innerduct or outerduct is required, the repair kits
9 shall be installed per manufacturer's recommendations. Repair kits and each
10 connection point between the repair kit and the existing raceway system shall be sealed
11 to prevent air leakage during future cable installation.
12

13 **8-20.3(8) Wiring**

14 The second sentence in the eleventh paragraph is revised to read:

15
16 Every conductor at every wire termination, connector, or device shall have an approved
17 wire marking sleeve bearing, as its legend, the circuit number indicated in the Contract.
18

19 **8-20.3(13)A Light Standards**

20 In the third paragraph, the last sentence of item number 1 is revised to read:

21
22 Conduit shall extend a maximum of 1 inch above the top of the foundation, including
23 grounding end bushing or end bell bushing.
24

25 In the fourth paragraph, the second sentence of item number 1 is revised to read:

26
27 Conduits shall be cut to a maximum height of 2 inches above the foundation including
28 grounding end bushing or end bell bushing.
29

30 **Section 8-22, Pavement Marking** 31 **January 5, 2015**

32 **8-22.3(6) Removal of Pavement Markings**

33 The second sentence of the first paragraph is revised to read:

34
35 Grinding to remove painted markings is only allowed prior to application of a Bituminous
36 Surface Treatment.
37

38 **Section 8-23, Temporary Pavement Markings** 39 **January 5, 2015**

40 This section's content is deleted in its entirety and replaced with the following new sub-
41 sections:
42

43 **8-23.1 Description**

44 The Work consists of furnishing, installing, and removing temporary pavement
45 markings. Temporary pavement markings shall be provided where noted in the Plans;
46 for all lane shifts and detours resulting from construction activities; or when permanent
47 markings are removed because of construction operations.
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8-23.2 Materials

Materials for temporary markings shall be paint, plastic, tape, raised pavement markers or flexible raised pavement markers. Materials for pavement markings shall meet the following requirements:

Raised Pavement Markers	9-21
Temporary Marking Paint	9-34.2(6)
Plastic	9-34.3
Glass Beads for Pavement Marking Materials	9-34.4
Temporary Pavement Marking Tape	9-34.5
Temporary Flexible Raised Pavement Markers	9-34.6

8.23.3 Construction Requirements

8-23.3(1) General

The Contractor shall select the type of pavement marking material in accordance with the Contract.

8-23.3(2) Preliminary Spotting

All preliminary layout and marking in preparation for application or removal of temporary pavement markings shall be the responsibility of the Contractor.

8-23.3(3) Preparation of Roadway Surface

Surface preparation for temporary pavement markings shall be in accordance with the manufacturer’s recommendations.

8-23.3(4) Pavement Marking Application

8-23.3(4)A Temporary Pavement Markings – Short Duration

Temporary pavement markings – short duration shall meet the following requirements:

Temporary Center Line – A BROKEN line used to delineate adjacent lanes of traffic moving in opposite directions. The broken pattern shall be based on a 40-foot unit, consisting of a 4-foot line with a 36-foot gap if paint or tape is used. If temporary raised pavement markers are used, the pattern shall be based on a 40-foot unit, consisting of a grouping of three temporary raised pavement markers, each spaced 3 feet apart, with a 34 foot gap.

Temporary Edge Line – A SOLID line used on the edges of Traveled Way. The line shall be continuous if paint or tape is used. If temporary raised pavement markers are used, the line shall consist of markers installed continuously at 5-foot spacing.

Temporary Lane Line – A BROKEN line used to delineate adjacent lanes with traffic traveling in the same direction. The broken pattern shall be based on a 40-foot unit, consisting of a 4-foot line with a 36-foot gap, if paint or tape is used. If temporary raised pavement markers are used, the pattern shall be based on a 40-foot unit, consisting of a grouping of three temporary raised pavement markers, each spaced 3 feet apart, with a 34 foot gap.

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Lane line and right edge line shall be white in color. Center line and left edge line shall be yellow in color. Edge lines shall be installed only if specifically required in the Contract. All temporary pavement markings shall be retroreflective.

8-23.3(4)A1 Temporary Pavement Marking Paint

Paint used for short duration temporary pavement markings shall be applied in one application at a thickness of 15 mils or 108 square feet per gallon. Glass beads shall be in accordance with Section 8-22.3(3)G.

8-23.3(4)A2 Temporary Pavement Marking Tape

Application of temporary pavement marking tape shall be in conformance with the manufacturer's recommendations.

Black mask pavement marking tape shall mask the existing line in its entirety.

8-23.3(4)A3 Temporary Raised Pavement Markers

Temporary raised pavement markers are not allowed on bituminous surface treatments.

8-23.3(4)A4 Temporary Flexible Raised Pavement Markers

Flexible raised pavement markers are required for new applications of bituminous surface treatments. Flexible raised pavement markers are not allowed on other pavement types unless otherwise specified or approved by the Engineer. Flexible raised pavement markers shall be installed with the protective cover in place. The cover shall be removed immediately after spraying asphaltic material.

8-23.3(4)B Temporary Pavement Markings – Long Duration

Application of paint, pavement marking tape and plastic for long duration pavement markings shall meet the requirements of Section 8-22.3(3); application of raised pavement markers shall meet the requirements of Section 8-09.3; and application of flexible pavement markings shall be in conformance with the manufacturer's recommendations.

8-23.3(4)C Tolerance for Lines

Tolerance for lines shall conform to Section 8-22.3(4).

8-23.3(4)D Maintenance of Pavement Markings

Temporary pavement markings shall be maintained in serviceable condition throughout the project until permanent pavement markings are installed. As directed by the Engineer; temporary pavement markings that are damaged, including normal wear by traffic, shall be repaired or replaced immediately. Repaired and replaced pavement markings shall meet the requirements for the original pavement marking.

8-23.3(4)E Removal of Pavement Markings

Removal of temporary paint is not required prior to paving; all other temporary pavement markings shall be removed.

1 All temporary pavement markings that are required on the wearing course prior
2 to construction of permanent pavement markings and are not a part of the
3 permanent markings shall be completely removed concurrent with or
4 immediately subsequent to the construction of the permanent pavement
5 markings. Temporary flexible raised pavement markers on bituminous surface
6 treatment pavements shall be cut off flush with the surface if their location
7 conflicts with the alignment of the permanent pavement markings. All other
8 temporary pavement markings shall be removed in accordance with Section 8-
9 22.3(6).

10
11 All damage to the permanent Work caused by removing temporary pavement
12 markings shall be repaired by the Contractor at no additional cost to the
13 Contracting Agency.
14

15 **8-23.4 Measurement**

16 Temporary pavement markings will be measured by the linear foot of each installed line
17 or grouping of markers, with no deduction for gaps in the line or markers and no
18 additional measurement for the second application of paint required for long duration
19 paint lines. Short duration and long duration temporary pavement markings will be
20 measured for the initial installation only.
21

22 **8-23.5 Payment**

23 Payment will be made in accordance with Section 1-04.1, for each of the following Bid
24 items that are included in the Proposal:

25
26 "Temporary Pavement Marking – Short Duration", per linear foot.

27
28 "Temporary Pavement Marking – Long Duration", per linear foot.
29

30 The unit Contract price per linear foot for "Temporary Pavement Marking – Short
31 Duration" and "Temporary Pavement Marking – Long Duration" shall be full pay for
32 all Work.
33

34 **Section 9-01, Portland Cement**
35 **January 5, 2015**

36 **9-01.2(3) Low Alkali Cement**

37 This section is revised to read:

38
39 When low alkali portland cement is required, the percentage of alkalies in the cement
40 shall not exceed 0.60 percent by weight calculated as Na_2O plus $0.658 \text{ K}_2\text{O}$. This
41 limitation shall apply to all types of portland cement.
42

43 **9-01.2(4) Blended Hydraulic Cement**

44 The first paragraph is revised to read:

45
46 Blended hydraulic cement shall be either Type IP(X)(MS) or Type IS(X)(MS) cement
47 conforming to AASHTO M 240 or ASTM C 595, except that the portland cement used to
48 produce blended hydraulic cement shall not contain more than 0.75 percent alkalies by
49 weight calculated as Na_2O plus $0.658 \text{ K}_2\text{O}$ and shall meet the following additional
50 requirements:
51

- 1 1. Type IP(X)(MS) - Portland-Pozzolan Cement where (X) equals the targeted
2 percentage of fly ash, the fly ash is limited to a maximum of 35 percent by
3 weight of the cementitious material; (MS) indicates moderate sulfate resistance.
4
- 5 2. Type IS(X)(MS) - Portland Blast- Furnace Slag Cement, where: (X) equals the
6 targeted percentage of ground granulated blast-furnace slag, the ground
7 granulated blast furnace slag is limited to a maximum of 50 percent by weight
8 of the cementitious material; (MS) indicates moderate sulfate resistance.
9

10 The first sentence of the second paragraph is revised to read:

11 The source and weight of the fly ash or ground granulated blast-furnace slag shall be
12 certified on the cement mill test report or cement certificate of analysis and shall be
13 reported as a percent by weight of the total cementitious material.
14

15

16 **9-01.3 Tests and Acceptance**

17 The first paragraph is revised to read:

18 Cement may be accepted by the Engineer based on the cement mill test report number
19 or cement certificate of analysis number indicating full conformance to the
20 Specifications. All shipments of the cement to the Contractor or concrete supplier shall
21 identify the applicable cement mill test report number or cement certificate of analysis
22 number and shall be provided by the Contractor or concrete supplier with all concrete
23 deliveries.
24

25

26 The second paragraph is revised to read:

27 Cement producers/suppliers that certify portland cement or blended cement shall
28 participate in the Cement Acceptance Program as described in WSDOT Standard
29 Practice QC 1.
30

31

32 **9-01.4 Storage on the Work Site**

33 This section is revised to read:

34 At the request of the Engineer, the Contractor shall provide test data to show that
35 cement stored on site for longer than 60 days meets the requirements of 9-01. Tests
36 shall be conducted on samples taken from the site in the presence of the Engineer. Test
37 results that meet the requirements of 9-01 shall be valid for 60 days from the date of
38 sampling, after which the Engineer may require further testing.
39

40

41 **Section 9-03, Aggregates**
42 **August 4, 2014**

43 **9-03.1(2)C Use of Substandard Gradings**

44 This section including title is deleted in its entirety and replaced with the following:

45 **Vacant**
46

47

48 **9-03.1(4)C Grading**

49 In the second paragraph, the first sentence is deleted.
50

1 The third paragraph is deleted.

2

3 **9-03.1(5)B Grading**

4 The last paragraph is revised to read:

5

6 The Contracting Agency may sample each aggregate component prior to introduction to
7 the weigh batcher or as otherwise determined by the Engineer. Each component will be
8 sieve analyzed separately in accordance with WSDOT FOP for WAQTC/AASHTO Test
9 Method T-27/11. All aggregate components will be mathematically re-combined by the
10 proportions (percent of total aggregate by weight) provided by the Contractor on
11 Concrete Mix Design Form 350-040.

12

13 **9-03.8(1) General Requirements**

14 The first paragraph up until the colon is revised to read:

15

16 Preliminary testing of aggregates for source approval shall meet the following test
17 requirements:

18

19 The list in the first paragraph is supplemented with the following:

20

21 Sand Equivalent 45 min.

22

23 The following new paragraph is inserted after the first paragraph:

24

25 Aggregate sources that have 100 percent of the mineral material passing the No. 4
26 sieve shall be limited to no more than 5 percent of the total weight of aggregate.

27

28 **9-03.14(3) Common Borrow**

29 This section is revised to read:

30

31 Material for common borrow shall consist of granular or nongranular soil and/or
32 aggregate which is free of deleterious material. Deleterious material includes wood,
33 organic waste, coal, charcoal, or any other extraneous or objectionable material. The
34 material shall not contain more than 3 percent organic material by weight. The plasticity
35 index shall be determined using test method AASHTO T 89 and AASHTO T 90.

36

37 The material shall meet one of the options in the soil plasticity table below.

38

39

40

Soil Plasticity Table

Option	Sieve	Percent Passing	Plasticity Index
1	No. 200	0 - 12	N/A
2	No. 200	12.1 - 35	6 or Less
3	No. 200	Above 35	0

41

All percentages are by weight.

42

AMENDMENTS

1 If requested by the Contractor, the plasticity index may be increased with the approval
2 of the Engineer.

3
4 **9-03.14(4) Gravel Borrow for Structural Earth Wall**

5 In the second table, the row beginning with “pH” is revised to read:
6

pH	WSDOT Test Method T 417	4.5 - 9	5 – 10
----	-------------------------	---------	--------

7
8

9 **Section 9-04, Joint and Crack Sealing Materials**
10 **January 5, 2015**

11 **9-04.1(4) Elastomeric Expansion Joint Seals**

12 In this section, “AASHTO M 220” is revised to read “ASTM D 2628”.

13

14 **9-04.2 Joint Sealants**

15 In the first paragraph, “AASHTO M 324” is revised to read “ASTM D 6690”.

16

17 **9-04.2(2) Poured Rubber Joint Sealer**

18 In item number 9, “WSDOT Test Method No. 412” is revised to read “ASTM D 5329”.

19

20 **Section 9-05, Drainage Structures and Culverts**
21 **April 7, 2014**

22 **9-05.13 Ductile Iron Sewer Pipe**

23 The first paragraph is deleted.

24

25 **Section 9-06, Structural Steel and Related Materials**
26 **January 5, 2015**

27 **9-06.5(4) Anchor Bolts**

28 The third sentence of the second paragraph is revised to read:

29

30 Nuts for ASTM F 1554 Grade 36 or 55 black or galvanized anchor bolts shall conform to
31 ASTM A 563, Grade A or DH.

32

33 **Section 9-07, Reinforcing Steel**
34 **January 6, 2014**

35 **9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement)**

36 This section’s title is revised to read:

37

38 **9-07.5(2) Corrosion Resistant Dowel Bars (for Cement Concrete Pavement and**
39 **Cement Concrete Pavement Rehabilitation)**

40

AMENDMENTS

AMEND

1 **Section 9-08, Paints and Related Materials**

2 **January 5, 2015**

3 **9-08.1(2)H Top Coat, Single Component, Moisture-Cured Polyurethane**

4 The second paragraph is revised to read:

5

6 Color and Gloss: As specified in the Plans or Special Provisions

7

8 The last item in the requirements list is revised to read:

9

10 The top coat shall be a gloss or semi-gloss

11

12 **9-08.1(8) Standard Colors**

13 The second paragraph is deleted.

14

15 The third paragraph is revised to read:

16

17 Unless otherwise specified, all top or finish coats shall be gloss or semi-gloss, with the
18 paint falling within the range of greater than 70 for gloss and 35 to 70 for semi-gloss on
19 the 60-degree gloss meter.

20

21 **Section 9-09, Timber and Lumber**

22 **January 6, 2014**

23 **9-09.3(1) General Requirements**

24 The fourth paragraph is revised to read:

25

26 All orders of treated timber and lumber shall be accompanied by a Certificate of
27 Treatment record. The Certificate of Treatment showing conformance to this
28 specification and AWWPA standards shall include the following information:

29 Name and location of the wood preserving company,

30 Customer identification,

31 Date of treatment and charge number,

32 Type of chemical used and amount of retention,

33 Treating process and identification of the Specification used,

34 Boring records verifying treatment penetration for timber and lumber with a nominal
35 dimension of 6" x 6" or larger,

36 Description of material that was treated, and

37 Signature of a responsible plant official.

38

39 The fifth paragraph is deleted.

40

41 The first sentence in the last paragraph is revised to read:

42 All timber and lumber to be used in aquatic environments, unless specified otherwise in
43 the Contract, shall be chemically treated using Western Wood Preservers Institute Best
44 Management Practices (BMPs).

45

AMENDMENTS

AMEND

1 **Section 9-10, Piling**

2 **March 3, 2014**

3 **9-10.5 Steel Piling**

4 This section is revised to read:

5

6 The material for rolled steel piling H-piling and pile splices shall conform to ASTM A 36,
7 ASTM A 572 or ASTM A 992. The material for steel pipe piling and splices shall conform
8 to one of the following requirements except as specifically noted in the Plans:

9

- 10 1. API 5L Grade X42 or X52 material may be used for longitudinal seam welded or
11 helical (spiral) seam submerged-arc welded pipe piles of any diameter.
- 12 2. ASTM A 252 Grade 2 or 3 material may be used for longitudinal seam welded
13 or helical (spiral) seam submerged-arc welded pipe piles of any diameter. For
14 the purposes of welding and prequalification of base metal, steel pipe pile
15 designated as ASTM A 252 may be treated as prequalified provided the
16 chemical composition conforms to a prequalified base metal classification listed
17 in Table 3.1 of the AWS D1.1/D1.1M, latest edition, Structural Welding Code,
18 the grade of pipe piling meets or exceeds the grade specified in the Plans, and
19 the carbon equivalent (CE) is a maximum of 0.45-percent.
- 20 3. ASTM A 572 or ASTM A 588 material may be used for longitudinal seam welded
21 piles of any diameter.

22

23 For helical (spiral) seam submerged-arc welded pipe piles, the maximum radial offset of
24 strip/plate edges shall be 1/8 inch. The offset shall be transitioned with a taper weld and
25 the slope shall not be less than a 1 in 2.5 taper. The weld reinforcement shall not be
26 greater than 3/16 inches and misalignment of weld beads shall not exceed 1/8 inch.

27

28 Steel soldier piles, and associated steel bars and plates, shall conform to ASTM A 36,
29 ASTM A 572 or ASTM A 992, except as otherwise noted in the Plans.

30

31 All steel piling may be accepted by the Engineer based on the Manufacturer's
32 Certificate of Compliance submitted in accordance with Section 1-06.3. The
33 manufacturer's certificate of compliance submittal for steel pipe piles shall be
34 accompanied by certified mill test reports, including chemical analysis and carbon
35 equivalence, for each heat of steel used to fabricate the steel pipe piling.

36

37 **Section 9-13, Riprap, Quarry Spalls, Slope Protection, and Rock for Erosion**
38 **and Scour Protection and Rock Walls**

39 **January 5, 2015**

40 This section's content is deleted.

41

42 **9-13.1 Loose Riprap**

43 This section's content, including title and subsections, is revised to read the following:

44

45 **9-13.1 Riprap and Quarry Spalls**

46

47 **9-13.1(1) General**

48 Riprap and quarry spalls shall consist of broken stone or broken concrete rubble
49 and shall be free of rock fines, soil, or other extraneous material. Concrete rubble

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shall not be contaminated by foreign materials such as fibers, wood, steel, asphalt, sealant, soil, plastic and other contaminants or deleterious material. Concrete rubble that is imported to the job site will require testing and certification for toxicity characteristics per Section 9-03.21(1).

The grading of the riprap shall be determined by the Engineer by visual inspection of the load before it is dumped into place, or, if so ordered by the Engineer, by dumping individual loads on a flat surface and sorting and measuring the individual rocks contained in the load. Should the riprap contain insufficient spalls, as defined in Section 9-13.1(5), the Contractor shall furnish and place supplementary spall material.

Riprap and quarry spalls shall be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather and shall conform to the following requirements for quality.

Aggregate Property	Test Method	Requirement
Degradation Factor	WSDOT T 113	15 minimum
Los Angeles Wear, 500 Rev.	AASHTO T 96	50% maximum
Specific Gravity, SSD	AASHTO T 85	2.55 minimum

9-13.1(2) Heavy Loose Riprap

Heavy loose riprap shall meet the following requirements for grading:

	Minimum Size	Maximum Size
40% to 90%	1 ton (½ cubic yd.)	
70% to 90%	300 lbs. (2 cu. ft.)	
10% to 30%	3 inch	50 lbs. (spalls)

9-13.1(3) Light Loose Riprap

Light loose riprap shall meet the following requirements for grading:

	Size Range	Maximum Size
20% to 90%	300 lbs. to 1 ton (2 cu. ft. to ½ cu. yd.)	
15% to 80%	50 lbs. to 1 ton (⅓ cu. ft. to ½ cu. yd.)	
10% to 20%	3 inch	50 lbs. (spalls)

9-13.1(4) Hand Placed Riprap

Hand placed riprap shall be as nearly rectangular as possible, 60 percent shall have a volume of not less than 1 cubic foot. No stone shall be used which is less than 6 inches thick, nor which does not extend through the wall.

9-13.1(5) Quarry Spalls

Quarry spalls shall meet the following requirements for grading:

Sieve Size	Percent Passing
8"	100
3"	40 max.
¾"	10 max.

1 **9-13.2 Hand Placed Riprap**
2 This section, including title, is deleted in its entirety and replaced with the following:
3
4 **9-13.2 Vacant**
5
6 **9-13.4 Rock for Erosion Control and Scour Protection**
7 The last sentence is revised to read:
8
9 The use of recycled materials and concrete rubble is not permitted for this application.
10
11 **9-13.6 Quarry Spalls**
12 This section, including title, is deleted in its entirety and replaced with the following:
13
14 **9-13.6 Vacant**
15
16 **Section 9-14, Erosion Control and Roadside Planting**
17 **January 5, 2015**

18 **9.14.1 Soil**
19 This section, including title, is revised to read:
20
21 **9-14.1 Topsoil**
22 Topsoil shall not contain any recycled material, foreign materials, or any listed Noxious
23 and Nuisance weeds of any Class designated by authorized State or County officials.
24 Aggregate shall not comprise more than 10% by volume of Topsoil and shall not be
25 greater than two inches in diameter.
26
27 **9-14.1(2) Topsoil Type B**
28 The last sentence of the second paragraph is deleted.
29
30 **9-14.2 Seed**
31 This section is revised to read:
32
33 Seed of the type specified shall be certified in accordance with WAC 16-302. Seed
34 mixes shall be commercially prepared and supplied in sealed containers. The labels
35 shall show:
36
37 (1) Common and botanical names of seed
38 (2) Lot number
39 (3) Net weight
40 (4) Pounds of Pure live seed (PLS) in the mix
41 (5) Origin of seed
42
43 All seed vendors must have a business license issued by supplier's state or provincial
44 Department of Licensing with a "seed dealer" endorsement.
45
46 **9-14.4(3) Bark or Wood Chips**
47 This section's title is revised to read:
48

AMENDMENTS

1 **Bark or Wood Chip Mulch**

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The first paragraph is revised to read:

Bark or wood chip mulch shall be derived from fir, pine, or hemlock species. It shall not contain resin, tannin, or other compounds in quantities that would be detrimental to plant life. Sawdust shall not be used as mulch. Mulch produced from finished wood products or construction debris will not be allowed.

10 **9-14.4(6) Gypsum**

11 The first sentence is revised to read:

12
13
14

Gypsum shall consist of Calcium Sulfate (CaSO₄·2H₂O) in a pelletized or granular form.

15 **9-14.4(7) Tackifier**

16 This section is revised to read:

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21

Tackifiers are used as a tie-down for soil, compost, seed, and/or mulch. Tackifiers shall contain no growth or germination-inhibiting materials and shall not reduce infiltration rates. Tackifiers shall hydrate in water and readily blend with other slurry materials.

The Contractor shall provide test results documenting the tackifier meets the requirements for Acute Toxicity, Solvents, and Heavy Metals as required in Table 1 in Section 9-14.4(2). The tests shall be performed at the manufacturer’s recommended application rate.

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27 **9-14.4(8) Compost**

28 The second paragraph is revised to read:

29
30
31

Compost production and quality shall comply with WAC 173-350.

32 **9-14.4(8)A Compost Submittal Requirements**

33 Item 2 is revised to read:

34
35
36
37
38

- 5. A copy of the Solid Waste Handling Permit issued to the manufacturer by the Jurisdictional Health Department in accordance with WAC 173-350 (Minimum Functional Standards for Solid Waste Handling).

39 **9-14.6(1) Description**

40 Item number 3 in the fourth paragraph is revised to read:

41
42
43
44
45
46

- 6. Live pole cuttings shall have a diameter between 2 inches and 3.5 inches. Live poles shall have no more than three branches which must be located at the top end of the pole and those branches shall be pruned back to the first bud from the main stem.

47 **9-14.6(2) Quality**

48 The second and third paragraphs in this section are revised to read:

49
50
51

All plant material shall comply with State and Federal laws with respect to inspection for plant diseases and insect infestation. Plants must meet Washington State

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1 Department of Agriculture plant quarantines and have a certificate of inspection. Plants
2 originating in Canada must be accompanied by a phytosanitary certificate stating the
3 plants meet USDA health requirements.
4

5 All plant material shall be purchased from a nursery licensed to sell plants in their state
6 or province.
7

8 **Section 9-15, Irrigation System**
9 **August 4, 2014**

10 **9-15.18 Detectable Marking Tape**

11 In the second paragraph, the table is supplemented with the following new row:
12

Non-Potable Water	Purple
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13
14

15 **Section 9-16, Fence and Guardrail**
16 **August 4, 2014**

17 **9-16.2(1)B Wood Fence Posts and Braces**

18 In the table, the row beginning with "ACA" is deleted.
19

20 **Section 9-29, Illumination, Signal, Electrical**
21 **January 5, 2015**

22 **9-29.1 Conduit, Innerduct, and Outerduct**

23 This section is supplemented with the following new subsection:
24

25 **9-29.1(9) Repair**

26 Manufacturer repair kits shall be used for field repair of existing conduit, innerduct and
27 outerduct. The conduit repair kit shall be manufactured specifically for the repair of
28 existing damaged conduit, inner duct and outer duct. The repair kit shall be
29 prepackaged and include the split conduit and split couplings necessary to restore the
30 damaged conduit to the original inside dimensions including a water and air tight seal.
31

32 **9-29.2(1)B Heavy Duty Junction Boxes**

33 The second paragraph is revised to read:
34

35 The Heavy-Duty Junction Box steel frame, lid support and lid fabricated from steel plate
36 and shapes shall be painted with a shop applied, inorganic zinc primer in accordance
37 with Section 6-07.3. Ductile iron and gray iron castings shall not be painted.
38

39 The following new paragraph is inserted after the second paragraph:
40

41 The concrete used in Heavy-Duty Junction Boxes shall have a minimum compressive
42 strength of 4,000 psi.
43

44 In the fourth paragraph (after the preceding Amendment is applied), the table is revised to
45 read:
46

Materials	Requirement
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AMENDMENTS

Concrete	Section 6-02
Reinforcing Steel	Section 9-07
Lid	ASTM A 786 diamond plate steel, rolled from plate complying with ASTM A 572, grade 50 or ASTM A 588, and having a min. CVN toughness of 20 ft-lb at 40 degrees F. Or Ductile iron casting meeting Section 9-05.15
Frame and stiffener plates	ASTM A 572 grade 50 or ASTM A 588, both with min. CVN toughness of 20 ft-lb at 40 degrees F Or Gray iron casting meeting Section 9-05.15
Anchors (studs)	Section 9-06.15
Threaded Anchors for Gray Iron Frame	ASTM F1554 grade 55 Headed Anchor Requirements
Bolts, Studs, Nuts, Washers	ASTM F 593 or A 193, Type 304 or 316, or Stainless steel grade 302, 304, or 316 in accordance with approved shop drawings
Hinges and Locking and Latching Mechanism and associated Hardware and Bolts	In accordance with approved shop drawings
Safety Bars	In accordance with approved shop drawings

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The last paragraph is revised to read:

The bearing seat and lid perimeter shall be free from burrs, dirt, and other foreign debris that would prevent solid seating. Bolts and nuts shall be liberally coated with anti-seize compound. Bolts shall be installed snug tight. The bearing seat and lid perimeter shall be machined to allow a minimum of 75 percent of the bearing areas to be seated with a tolerance of 0.0 to 0.005 inches measured with a feeler gage. The bearing area percentage will be measured for each side of the lid as it bears on the frame.

9-29.2(2) Standard Duty and Heavy-Duty Cable Vaults and Pull Boxes

This section's title is revised to read:

Small Cable Vaults, Standard Duty Cable Vaults, Heavy-Duty Cable Vaults, Standard Duty Pull Boxes, and Heavy-Duty Pull Boxes

In the first paragraph, the first sentence is revised to read:

Small, Standard Duty and Heavy-Duty Cable Vaults and Standard Duty and Heavy-Duty Pull Boxes shall be constructed as a concrete box and as a concrete lid.

9-29.2(2)A Standard Duty Cable Vaults and Pull Boxes

This section's title is revised to read:

Small Cable Vaults, Standard Duty Cable Vaults, and Standard Duty Pull Boxes

The first paragraph is revised to read:

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1 Small and Standard Duty Cable Vaults and Standard Duty Pull boxes shall be concrete
2 and have a minimum load rating of 22,500 pounds and be tested in accordance with
3 Section 9-29.2(1)C for concrete Standard Duty Junction Boxes.
4

5 In the second paragraph, the first sentence is revised to read:
6

7 Concrete for Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes shall
8 have a minimum compressive strength of 4,000 psi.
9

10 In the third paragraph, the first sentence is revised to read:
11

12 All Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes placed in
13 sidewalks, walkways, and shared-use paths shall have slip-resistant surfaces.
14

15 The fourth paragraph (up until the colon) is revised to read:
16

17 Materials for Small and Standard Duty Cable Vaults and Standard Duty Pull Boxes shall
18 conform to the following:
19

20 **9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable**

21 This section is supplemented with the following new subsection:
22

23 **9-29.3(3) Wire Marking Sleeves**

24 Wire marking sleeves shall be full-circle in design, non-adhesive, printable using an
25 indelible ink and shall fit snugly on the wire or cable. Marking sleeves shall be made
26 from a PVC or polyolefin, and provide permanent identification for wires and cables.
27

28 **9-29.3(2)A4 Location Wire**

29 This section is revised to read:
30

31 Location wire shall be steel core copper clad minimum size AWG 14 insulated
32 conductor. The insulation shall be orange High Molecular Weight High Density
33 Polyethylene (HMHDPE).
34

35 **Section 9-31, Elastomeric Bearing Pads**

36 **August 4, 2014**

37 This section's title is revised to read:
38

39 **Elastomeric Pads**

40 **9-31.1 Requirements**

41 In the first paragraph, the word "bearing" is deleted from the first sentence.
42
43

44 In the first sentence of the second paragraph, the word "bearing" is deleted and replaced
45 with "elastomeric".
46

47 In the last sentence of the second paragraph, the word "Bearing" is deleted and replaced
48 with "Elastomeric".
49

AMENDMENTS

1 In the third paragraph, the word “bearing” is deleted and replaced with the word
2 “elastomeric”.

3
4 **Section 9-32, Mailbox Support**
5 **August 4, 2014**

6 **9-32.7 Type 2 Mailbox Support**

7 The first sentence is revised to read:

8
9 Type 2 mailbox supports shall be 2-inch 14-gage steel tube and shall meet the NCHRP
10 350 or the Manual for Assessing Safety Hardware (MASH) crash test criteria.

11
12 **Section 9-34, Pavement Marking Material**
13 **January 5, 2015**

14 **9-34.2 Paint**

15 The second paragraph is revised to read:

16
17 Blue and black paint shall comply with the requirements of yellow paint in Section 9-
18 34.2(4) and Section 9-34.2(5), with the exception that blue and black paints do not need
19 to meet the requirements for titanium dioxide, directional reflectance, and contrast ratio.

20
21 **9-34.4 Glass Beads for Pavement Marking Materials**

22 In the third paragraph, the table titled “Metal Concentration Limits” is revised to read:

23

Metal Concentration Limits		
Element	Test Method	Max. Parts Per Million (ppm)
Arsenic	EPA 3052 SW-846 6010C	10.0
Barium	EPA 3052 SW-846 6010C	100.0
Cadmium	EPA 3052 SW-846 6010C	1.0
Chromium	EPA 3052 SW-846 6010C	5.0
Lead	EPA 3052 SW-846 6010C	50.0
Silver	EPA 3052 SW-846 6010C	5.0
Mercury	EPA 3052 SW-846 7471B	4.0

24

25

26 **9-34.5 Temporary Pavement Marking Tape**

27 This section is revised to read:

28

29 Biodegradable tape with paper backing is not allowed.

30

31 This section is supplemented with the following new sub-sections:

32

33 **9-34.5(1) Temporary Pavement Marking Tape – Short Duration**

34 Temporary pavement marking tape for short duration shall conform to ASTM D4592
35 Type II except that black tape, black mask tape and the black portion of the contrast
36 removable tape, shall be non-reflective.

37

38 **9-34.5(2) Temporary Pavement Marking Tape – Long Duration**

39 Temporary pavement marking tape for long duration shall conform to ASTM D4592 Type
40 I. Temporary pavement marking tape for long duration, except for black tape, shall have
41 a minimum initial coefficient of retroreflective luminance of $200 \text{ mcd} \cdot \text{m}^{-2} \cdot \text{lx}^{-1}$ when

AMENDMENTS

1 measured in accordance with ASTM E 2832 or ASTM E 2177. Black tape, black mask
2 tape and the black portion of the contrast removable tape, shall be non-reflective.
3

4 **9-34.6 Temporary Raised Pavement Markers**

5 This section's title is revised to read:
6

7 **Temporary Flexible Raised Pavement Markers**

8
9 The second paragraph is deleted.
10

11 **Section 9-35, Temporary Traffic Control Materials** 12 **August 4, 2014**

13 **9-35.0 General Requirements**

14 The following item is deleted from the list of temporary traffic control materials:
15

16 Barrier Drums
17

18 The last sentence of the second paragraph is revised to read:
19

20 Certification for crashworthiness according to NCHRP 350 or the Manual for Assessing
21 Safety Hardware (MASH) will be required as described in Section 1-10.2(3).
22

23 **9-35.2 Construction Signs**

24 The first sentence is revised to read:
25

26 Construction signs shall conform to the requirements of the MUTCD and shall meet the
27 requirements of NCHRP Report 350 for Category 2 devices or MASH.
28

29 **9-35.7 Traffic Safety Drums**

30 The third paragraph is revised to read:
31

32 Drums and light units shall meet the crashworthiness requirements of NCHRP 350 or
33 MASH as described in Section 1-10.2(3).
34

35 **9-35.8 Barrier Drums**

36 This section including title is deleted in its entirety and replaced with the following:
37

38 **9-35.8 Vacant** 39

40 **9-35.12 Transportable Attenuator**

41 In the first paragraph, the fourth sentence is revised to read:
42

43 The Contractor shall provide certification that the transportable attenuator complies with
44 NCHRP 350 Test level 3 or MASH Test Level 3 requirements.
45

46 **9-35.13 Tall Channelizing Devices**

47 In the sixth paragraph, the last sentence is revised to read:
48

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- 1 The method of attachment must ensure that the light does not separate from the device
- 2 upon impact and light units shall meet the crashworthiness requirements of NCHRP 350
- 3 or MASH as described in Section 1-10.2(3).
- 4