



Oregon

Theodore R. Kulongoski, Governor

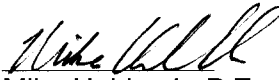
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DATE: February 8, 2007

Addenda No. 1

TO: PLAN HOLDERS

PREPARED BY: 
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David Evans and Associates, Inc.

SUBJECT: US 97: China Hat Rd. – Baker Rd./Lava Butte Section
The Dalles - California Highway
Deschutes County
Paving, Striping, Signing and VMS Project
(Bids to be opened and read February 22, 2007)

The following changes are made to the Project Bid Booklet:

1. The following changes are made to the Project Bid Items:

a. Quantity changes:

<u>Number</u>	<u>Item</u>	<u>Quantity</u>	
		<u>Original</u>	<u>New</u>
270	Cold Plane Pavement Removal, 2 inch Deep	1,321,000	1,446,639
340	Adjusting Guardrail	1,510	430

b. Deleted item:

<u>Number</u>	<u>Item</u>
250	Cold Plane Pavement Removal, 0 – 2 inch Deep

Make a copy of and use the new attached Bid Sheets. A Bid **not** including these new Bid Sheets **will be rejected as non-responsive**.

The following changes are made to the Project Special Provisions:

1. Subsection 00180.40 (c) Specific Limitations - The following sentence is added after the list of limitations:

Install all underground VMS components prior to paving.

2. Subsection 00220.40(e) Lane Restrictions - The first sentence of the subsection that begins with the words "Do not close any traffic....." through the sentence that begins with the words "Closure of more than...." is replaced with the following:

Do not close any traffic lanes on The Dalles – California Highway Monday through Thursday between 7:00 a.m. and 6:00 p.m.

3. Section 00594 Preparing and Coating Metal Structures - This Section is added after Section 00512. See attachment for full text.
4. Subsection 00745.11(d) Aggregate Treatment – Latex Polymer - This subsection is added after subsection 00745.11(a):

Add the following subsection:

00745.11(d) Aggregate Treatment - Latex Polymer - A latex polymer aggregate treatment material may be used to treat new crushed aggregates instead of lime if Tensile Strength Ratio test results on the mixture with the latex polymer treatment at the JMF meet the minimum criteria in 00745.13(b).

(1) General:

a. Provide a system to automatically meter the latex emulsion at the proper rate and apply the emulsion uniformly to the aggregate prior to the addition of the asphalt cement. Follow manufacturer's recommendations to set up, adjust and calibrate the equipment.

b. Demonstrate to the Engineer's satisfaction that the required application rate of latex solids is being met. If it is not, take corrective action. Document and notify the Engineer of the corrective action.

(2) Material - Use latex polymer emulsion concentrate meeting the following:

	Minimum	Maximum	Test Method
Solids Percent	66.0	71.0	ASTM D 1417
Residual Styrene, PPM	—	1000	ASTM D 1417
pH	9.75	11.25	ASTM D 1417
Brookfield Viscosity Spindle 2, 20 RPM, cPs	—	2000	ASTM D 1417
Mooney Viscosity, ML4	90	130	ASTM D 1417
Mechanical Stability, G/100 ml, 10 minutes	—	0.10	ASTM D 1417

Provide a quality compliance certificate for the polymer latex emulsion concentrate to the Engineer according to 00165.35.

(3) Application Rate - Apply the latex emulsion to achieve a minimum of 0.375 kg of latex solids per Mg (0.75 pounds of latex solids per ton) of new aggregate (0.0375%) for dense graded mixtures and a minimum of 0.25 kg of latex solids per Mg (0.50 pounds of latex solids per ton) of aggregate (0.025%) for open-graded mixtures. Higher application rates may be required to meet minimum TSR limits. Determine application rate during mix design testing.

(4) Treatment During HMAC Production:

- a. Adjust aggregate moisture content to meet manufacturer’s recommendation for emulsion application. Apply the latex emulsion at the minimum rate specified above or at a higher rate if TSR testing indicates a higher rate is required.
- b. Apply the latex emulsion to the aggregate just prior to entry into dryer drum. Mix aggregate with the emulsion in a pugmill or in the dryer drum prior to application of asphalt cement. Heat aggregates to at least 120° C (250 °F) after treatment and prior to addition of asphalt cement.

5. Subsection 00745.96(a) General - The paragraph that begins with the words "The price adjustment will..." is replaced with the following:

The price adjustment will be applied to the Contract unit price for the Pay items "Level 3, ½ inch Dense Lime Treated HMAC" and "PG 70-28 Asphalt in HMAC" for the quantity of material described above according to the following:

The following changes are made to the Project Plans:

- 1. Plan sheets no. 5, 2A-13 and 2A14 are replaced with revised plan sheets no. 5, 2A-13 and 2A14.

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Addenda No. 1

These changes will be included in the Contract for this Project. It is understood that your Bid will be submitted accordingly.

Make copies of the new Bid Sheets to replace the Special Provisions Bid Schedule Sheets.

dajs:

Attachments: New Bid Sheets
Section 00594
Revised Plan Sheets

BID SCHEDULE

CONTRACT ID: 13334

PROJECT: US97: CHINA HAT RD. - BAKER RD.
 /LAVA BUTTE SEC.

PROJECT KEY: 14549

ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
SECTION 0001 TEMPORARY FEATURES AND APPURTENANCES				
0010	ON-THE-JOB TRAINING	HOUR	300.00	
0020	MOBILIZATION	LS	ALL	
0030	TEMPORARY PROTECTION AND DIRECTION OF TRAFFIC	LS	ALL	
0040	TEMPORARY SIGNS	SQFT	1,000.00	
0050	TEMPORARY BARRICADES, TYPE II	EACH	25.00	
0060	TEMPORARY BARRICADES, TYPE III	EACH	15.00	
0070	TEMPORARY PLASTIC DRUMS	EACH	100.00	
0080	TEMPORARY FLEXIBLE PAVEMENT MARKERS	EACH	33,000.00	
0090	TEMPORARY STRIPING	FOOT	450.00	
0100	SEQUENTIAL ARROW SIGNS	EACH	2.00	
0110	PORTABLE CHANGEABLE MESSAGE SIGNS	EACH	2.00	
0120	FLAGGERS	HOUR	900.00	

BID SCHEDULE

CONTRACT ID: 13334

PROJECT: US97: CHINA HAT RD. - BAKER RD.
 /LAVA BUTTE SEC.

PROJECT KEY: 14549

ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
0130	TRAFFIC CONTROL SUPERVISOR	DAY 45.00		
0140	EROSION CONTROL	LS ALL		
0150	INLET PROTECTION	EACH 10.00		
0160	POLLUTION CONTROL PLAN	LS ALL		

SECTION 0002 ROADWORK

0170	CONSTRUCTION SURVEY WORK	LS ALL		
0180	REMOVAL OF GUARDRAIL	FOOT 50.00		
0190	ROCK EXCAVATION	CUYD 20.00		

SECTION 0003 DRAINAGE AND SEWERS

0200	ADJUSTING INLETS	EACH 10.00		
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SECTION 0004 SIGN BRIDGE (VMS)

0210	FURNISH DRILLING EQUIPMENT	LS ALL		
0220	DRILLED SHAFT CONCRETE	LS ALL		

BID SCHEDULE

CONTRACT ID: 13334

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 /LAVA BUTTE SEC.

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ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
0230	DRILLED SHAFT REINFORCEMENT	LS ALL		
0240	DRILLED SHAFTS, 48 INCH DIAMETER	FOOT 20.00		

SECTION 0005 BASES

0250	DELETED BID ITEM	LS ALL		
0260	COLD PLANE PAVEMENT REMOVAL, 2 - 4 INCH DEEP	SQFT 36,200.00		
0270	COLD PLANE PAVEMENT REMOVAL, 2 INCH DEEP	SQFT 1,446,639.00		
0280	AGGREGATE SHOULDERS	TON 4,000.00		

SECTION 0006 WEARING SURFACES

0290	ASPHALT IN TACK COAT	TON 80.00		
0300	LEVEL 3, 1/2 INCH DENSE LIME TREATED HMAC	TON 39,500.00		
0310	PG 70-28 ASPHALT IN HMAC	TON 2,765.00		
0320	EXTRA FOR ASPHALT APPROACHES	EACH 12.00		

SECTION 0007 PERMANENT TRAFFIC SAFETY AND GUIDANCE DEVICES

BID SCHEDULE

CONTRACT ID: 13334

PROJECT: US97: CHINA HAT RD. - BAKER RD.
 /LAVA BUTTE SEC.

PROJECT KEY: 14549

ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
0330	GUARDRAIL, TYPE 2A (CORTEN)	50.00 FOOT		
0340	ADJUSTING GUARDRAIL	430.00 FOOT		
0350	CONCRETE BARRIER	5,330.00 FOOT		
0360	REMOVE AND REINSTALL CONCRETE BARRIER	8,100.00 FOOT		
0370	REMOVE AND REINSTALL IMPACT ATTENUATOR	2.00 EACH		
0380	MILEPOST MARKER POSTS	10.00 EACH		
0390	PAVEMENT LEGEND, TYPE A: ARROWS	13.00 EACH		
0400	PAVEMENT LINE, TYPE A	72.00 SQFT		
0410	PERMANENT PAVEMENT STRIPING TAPE, PATTERNED, GROOVED	153,446.00 FOOT		
0420	PAVEMENT LINE REMOVAL	5,080.00 FOOT		
0430	PAVEMENT LEGEND REMOVAL	2.00 EACH		
0440	RUMBLE STRIPS, PATTERN TYPE A	5.20 MILE		

SECTION 0008 PERMANENT TRAFFIC CONTROL AND ILLUMINATION SYSTEMS

BID SCHEDULE

CONTRACT ID: 13334

PROJECT: US97: CHINA HAT RD. - BAKER RD.
 /LAVA BUTTE SEC.

PROJECT KEY: 14549

ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
0450	REMOVE EXISTING SIGNS	LS ALL		
0460	WOOD SIGN POSTS	FBM 174.00		
0470	SIGN SUPPORT FOOTINGS	LS ALL		
0480	BUTTERFLY SIGN STRUCTURES	LS ALL		
0490	MULTI-POST BREAKAWAY SIGN SUPPORTS	LS ALL		
0500	TRIANGULAR BASE BREAKAWAY SIGN SUPPORTS	LS ALL		
0510	EXIT NUMBER SIGN SUPPORTS	LS ALL		
0520	SQUARE TUBE SIGN SUPPORTS	LS ALL		
0530	TYPE "B" SIGNS IN PLACE	SQFT 87.00		
0540	TYPE "C" SIGNS IN PLACE	SQFT 309.00		
0550	TYPE "G" SIGNS IN PLACE	SQFT 695.80		
0560	TYPE "R" SIGNS IN PLACE	SQFT 45.00		
0570	TYPE "W1" SIGNS IN PLACE	SQFT 167.20		

BID SCHEDULE

CONTRACT ID: 13334

PROJECT: US97: CHINA HAT RD. - BAKER RD.
 /LAVA BUTTE SEC.

PROJECT KEY: 14549

ITEM NO	ITEM DESCRIPTION	QUANTITY AND UNITS	UNIT PRICE (IN FIGURES)	BID AMOUNT (IN FIGURES)
0580	TYPE "Y1" SIGNS IN PLACE	87.00 SQFT		
0590	TYPE "Y8" SIGNS IN PLACE	9.00 SQFT		
0600	BASIC ELECTRICAL MATERIALS, METHODS AND	ALL LS		
0610	LOOP REPLACEMENT	ALL LS		
	TOTAL BID			

Replace Section 00594 of the Standard Specifications with the following:

Section 00594 - Preparing and Coating Metal Structures

Description

00594.00 Scope - This work consists of preparing and coating new metal structures and features in the shop and in the field, and preparing and coating existing metal structures. This includes all:

- Exterior surfaces of butterfly sign structure
- Exterior surfaces of ODOT provided variable message sign controller cabinet

00594.01 Abbreviations, Definitions and References:

(a) Abbreviations:

ASTM – American Society for Testing Materials

DFT - Dry film thickness

FTMS - Federal Test Method Standard

SSPC – Society for Protective Coatings

(b) Definitions:

Cleaning - Removing detrimental material in preparation for coating.

Coat - Apply paint or other protective material to a substrate to form a single, uniform layer. A coat is comprised of as many applications as necessary to achieve the specified coat thickness.

Coating - Protective material after it is applied to a structure.

Coating Material - Protective material in the liquid state before application.

Coating System - All specified coats applied separately in a predetermined order.

Field Coating - The onsite coating of new or existing steel structures before or after erection.

Hold Point - A time at which the Contractor must cease a particular activity until a phase of work is inspected or tested. If the Engineer finds this phase conforms to the Specifications, the subsequent phase of work may proceed.

Maintenance Coating - The coating of existing steel structures that have been previously coated and need recoating.

Manufacturer's Recommendation - The written specifications and instructions provided by a manufacturer of a coating material concerning the handling, mixing and application of the coating material.

Phase - An activity or step of the preparation and coating procedures to be inspected or tested. The transition from one phase to another represents a hold point.

Preparation - Measures taken to provide a suitable surface ready to coat.

Shop Coating - The coating of steel surfaces in the fabrication shop before the steel is transported to the erection site.

Skin – A solid or semisolid membrane that forms on paint in a container.

Skimming - The process in which a film forms over a liquid coating, either during storage or after application.

Solvent - Liquid used to solvate or put materials into solution or to clean equipment and tools.

Substrate - Any surface to which a coating is to be applied. This may be the prepared surface of the steel structure, galvanizing, or a previous coating.

Surface Profile - Roughness of a cleaned steel surface. The height of the profile is measured from the bottom of the valleys to the top of the peaks in mils.

Thinner - Volatile liquids used to thin compatible coating materials. Thinners may be a blend of solvents.

(c) **References** - In this Section, references such as SSPC-SP 1 and SSPC-PA 1 refer to Volume 2, "Systems and Specifications", of SSPC's "Painting Manual".

In these Specifications, references are made to FTMS 141, "Paint, Varnish, Lacquers, and Related Materials: Methods of Inspection, Sampling and Testing", which is distributed by the U.S. General Services Administration.

00594.02 Location of Work:

(a) **New Steel Structures** - Prepare and coat new steel structures and features erected at locations shown on the contract drawings. All required preparation and coating shall take place at the fabrication shop after completion of fabrication and before transporting to the Project Site, except as provided in these Specifications.

(b) **Existing Steel Structures** - Prepare and coat the existing steel structures described in the Special Provisions.

(c) **Rehabilitating Coated Steel Structures** - Prepare and coat new steel members and existing steel structures impacted by erection. This includes all existing steel surfaces uncovered by the removal of existing steel, wood and concrete members except top flanges. Impacted areas include, but are not limited to areas where rivets or bolts are removed, and existing steel surfaces damaged during erection or other Contractor operations. All required preparation and coating of new steel members shall take place at the fabrication shop after completion of fabrication and before transporting to the Project Site except as provided in these Specifications. Preparation and coating of existing steel structures impacted by erection shall be performed in the field.

(d) **Non-Steel Metallic Substrates** - Prepare and coat new non-steel substrates and features erected at locations shown on the contract drawings. All required preparation and coating shall take place at the fabrication shop after completion of fabrication and before

transporting to the Project Site, except as provided in these Specifications. Prepare and coat existing non-steel substrates described in the special provisions.

00594.03 Precoating Conference - Before beginning work, the Contractor's supervisory personnel, together with any subcontractors and their supervisory personnel who are to be involved in the preparation and coating work, and a representative from the coating manufacturer shall meet with the Engineer for a precoating conference at a time mutually agreed upon. Ten business days prior to the precoating conference, the contractor shall submit a plan for accomplishing all phases of the galvanizing and coating work, including but not limited to galvanizing treatments, surface prep, coating application, materials, and quality control plan.

00594.04 Notice - Notify the Engineer, in writing, at least five business days in advance of the date that preparation and coating operations are to begin.

00594.06 Waste Handling & Disposal – Comply with section 00290, and the portions of SSPC Guide 7 that do not conflict with section 00290.

Materials

00594.10 General - Use materials meeting the requirements of this Section, the Special Provisions, and the applicable portions of SSPC-PA 1, "Shop, Field and Maintenance Painting", when not in conflict with either this Section or the Special Provisions.

00594.11 Coating Materials:

(a) Coating System - Provide coating materials from the QPL according to the following:

- (1) Shop coating of steel or iron surfaces, 3 coat system with inorganic zinc primer.
- (2) Shop coating or maintenance coating of steel or iron surfaces, 3 coat system with organic zinc primer.
- (3) Field rehabilitation of coated steel or iron surfaces, 3 coat system with surface tolerant organic zinc primer.
- (4) Shop coating or maintenance coating of non-ferrous surfaces, 2 coat system.

Application of coating materials will not be allowed until certifications required by section 00165.35 (a) & (b) have been provided and the materials are accepted for use by Agency check testing.

(b) Manufacturing - The coating material shall:

- Be prepared at the factory ready for application or mixing of multi-component coatings. Multi-component coating materials shall be proportioned by the manufacturer with each component in its correct proportion and furnished in separate containers ready for field mixing.
- Be homogeneous, free of contamination, and of a consistency suitable for the specified use.

- Include additives for control of sagging, pigment settling, leveling, drying, dryer absorption, skimming, and other qualities and properties that affect its application and curing.
- Not require a pretreatment chemical or material prior to application of the prime coat except as stipulated in these Specifications.
- Include required tinting and coloring materials at the time of manufacture. The first prime coat shall not be gray. When successive coats are specified, each coat of the system shall be of a different color to provide contrast between coats. The tinting material shall be compatible with the coating material and not detrimental to performance.
- Unless otherwise specified, the top coat shall conform to RAL #8015. Submit a color chip for approval by the Engineer prior to any coating application.
- Not vary in composition without prior notice by the manufacturer and approval of the Engineer. No reformulation will be allowed.
- Be applied before expiration of manufacturer's recommended shelf life.

(c) Packaging - Each container shall:

- Be the manufacturer's original unopened container.
- Be new steel or plastic of not more than 6 gallon capacity.
- Meet U.S. Department of Transportation's Hazardous Material Shipping Regulations.
- Be lined, if necessary, to prevent attack by the coating material. The lining shall not delaminate from the container wall so as to contaminate the coating.
- Be labeled with a quality compliance certificate according to 00165.35, showing the following:
 - Manufacturer's name
 - Exact title of coating material
 - Manufacturer's batch number
 - Date of manufacture
 - Identification of all toxic substances
 - Handling and application precautions

(d) Sampling and Testing - Have the coating material manufacturer furnish the following to the Agency's Materials and Research Section:

- One unopened 1 quart container of each coating material, each component of multicomponent coating material, and each thinner, from each batch of each coat. The Agency may, at its discretion, place an inspector at the site of manufacture and/or obtain check samples at the jobsite.
- A product data sheet for each type of coating material and thinner.
- A material safety data sheet with the initial sample of each type of coating material and thinner.

Agency testing will include those of the following tests necessary to insure that the coating materials conform to Specifications, manufacturers product data sheet, and such other testing as the Agency deems appropriate.

Test	Test Method
Density of liquid coatings, Inks, and related products.	ASTM D 1475
Determination of Zinc in Dry Films of Paints and Coatings	ODOT TM 614
Coarse Particles in Pigments, Pastes, and Paints	ASTM D 185
Consistency of Paints Using the Stormer Viscometer	ASTM D 562
Fineness of Dispersion of Pigment-Vehicle System	ASTM D 1210
Drying, Curing, or Film Formation of Organic Coatings at Room Temperatures	ASTM D 1640
Volatile Content of Paints	ASTM D 2369
Pigment Content of Solvent-type Paints	ASTM D 2371
Volume Nonvolatile Matter in Clear or Pigmented Coatings	ASTM D 2697
Vehicle Solids (Ordinary Centrifuge)	FTMS 141, Method 4051
Nonvolatile vehicle Content	FTMS 141, Method 4053

Agency testing is not to be construed as determining or predicting the performance or compatibility of the individual coating material or the total coating system.

(e) Specifications - The steel-to-steel contact surfaces at all slip-critical structural bolted connections using high strength bolts shall meet Class C (slip coefficient of 0.33), hot -dip galvanized surfaces and roughened by wire brushing after galvanizing. No coating shall be placed on these surfaces.

00594.12 Caulking - Caulking shall be a structural steel caulking from the QPL and approved for use by the coating manufacturer. The caulking color shall be clear, approximate the color of the top coating, or be overcoated as the Contractor elects.

Backing material shall be industrial grade polystyrene or polyurethane of sufficient diameter to fill the crevices or gaps as required. Obtain the Engineer's approval of the caulking and backing material before using.

Construction

00594.41 Preparation of Surfaces:

(a) **New Steel Structures** - Clean new steel structure surfaces to be coated according to SSPC SP 10, "Near-White Blast Cleaning", except as modified by this Section. The appearance of the final blast-cleaned surface shall closely approximate Pictorial Standard SP 10 of SSPC-Vis 1.

(b) **Existing Steel Structures** - Blast-clean existing steel structure surfaces to be coated according to SSPC-SP10 "Near White Blast Cleaning". The appearance of the blast-cleaned surface shall closely approximate Pictorial Standard SP 10 of SSPC-Vis 1.

Or clean to SSPC-SP12, "High and Ultrahigh Pressure Water Jetting", cleaned to visual condition "WJ-2".

(c) **Rehabilitating Existing Coated Steel Structures** - Clean all existing steel surfaces to be coated according to (SSPC-SP15) "Commercial Grade Power Tool Cleaning". The cleaned surface shall have a minimum surface profile of 1 mil.

The areas to be prepared shall include all areas of existing coated surfaces exposed by the removal of the existing components involved in the rehabilitation, all areas in which rivets, bolts, or plates are to be removed, and areas damaged by erection or other Contractor operations. All existing lead-based coatings exposed by the removal of any structural or miscellaneous member shall be completely cleaned to SSPC-SP15. All prepared areas shall extend at least 2 inches into tightly adhering, intact paint. The subsequent coating shall overlap the still intact coating by a minimum of 2 inches. Lightly sand the overlap area of the intact coating to provide a profile for the subsequent repair coating to adhere to.

(d) Non-Steel Metallic Substrates:

(1) **Galvanized Surfaces** - Prepare surfaces to be coated per ASTM D6386.

(2) **Aluminum** - Surfaces to be coated shall be solvent cleaned (SSPC-SP1) followed by either a light brush blast (SSPC-SP7 with a maximum nozzle pressure of 75 psi) or hand sanding to create a minimum 1 mil profile or meet manufacturer's recommendation.

(e) **All Metal Structures** - Remove fins, tears, slivers and sharp edges, plus hardened or damaged edges resulting from flame cutting, shearing or similar operations.

Clean all surfaces of material detrimental to the application of the coating system as follows:

(1) **Cleaning Methods** - Blast-clean surfaces using one or more of the following methods to discharge the abrasive:

- A stream of high-pressure air
- A rotating centrifugal paddlewheel
- A stream of high-pressure water

Use methods specified in SSPC-SP 1, "Solvent Cleaning", SSPC-SP 2, "Hand Tool Cleaning", SSPC-SP 3, "Power Tool Cleaning", and SSPC-SP15 "Commercial grade Power Tool Cleaning", as necessary to augment blast-cleaning.

(2) Abrasives - Perform blast-cleaning using an abrasive of a size which will continually produce a surface profile of at least 1 mil but not more than 4 mils, as measured by ASTM D4417 using replica tape on the prepared surface. The blast-cleaning shall result in a roughened steel surface comparable to a Keane-Tator Surface Profile Comparator for sand or grit using ASTM D4417.

If a centrifugal wheel with a grit mixture is used for blast-cleaning, each member shall be inspected and for those not meeting the comparator or profile requirements, perform a final blast-cleaning with high-pressure air with an abrasive to obtain the specified profile.

Abrasives shall have no corrosion products, water, oil or any other material detrimental to the application and adherence of the coatings. Abrasive shall conform to SSPC-AB1 or SSPC-AB3. Cleanliness will be tested according to ODOT TM 616 and ASTM D 4940. The conductivity results from ASTM D4940 shall not exceed 100 microsiemen/cm. Wet abrasives are allowed if wet blasting methods are used.

(3) Air - The high-pressure air used for blast-cleaning or blowing down shall be free of water, oil or any other material detrimental to the coating system. Provide adequate separators and traps. Compressed air cleanliness will be tested according to ASTM D4285 by the Engineer.

(4) Rust Inhibitor - If a rust inhibitor is not used with wet surface preparation methods, brush-blast any rust bloom on the surface before applying the coating. If an effective rust inhibitor is used, it shall be compatible with the coating system and shall be applied to the freshly cleaned surface or contained in the liquid used in cleaning. Use a rust inhibitor from the QPL, or prepare a test panel at least 14 calendar days before beginning work to show that the rust inhibitor does not cause loss of bond between the prepared steel substrate and the primer. If bond failure occurs, no further use of the rust inhibitor will be allowed.

(5) Cleaning Procedures - Perform blast-cleaning operations without damaging partially or entirely completed portions of the work. Do not blast-clean adjacent to areas being coated.

The blast-cleaned surface will be examined for any traces of corrosion, water, oil, grease, and other material deposited during the cleaning operations. If present, remove any detrimental material by solvent cleaning and reblast the surface.

(6) Final Preparation - Before coating, the prepared surface shall be:

- Blown down using high pressure air within the fully enclosed containment with the specified ventilation operating and supplemented by brushing if required.
- Free of all residue
- Repair any damaged galvanizing in accordance with ASTM A780.
- Acceptable to the Engineer

00594.42 Coating Metal Structures:

(a) Description - When not in conflict with this Section and the Special Provisions, perform coating application conforming to:

- The applicable portions of the SSPC-PA 1
- The recommendations of the coating manufacturer
- The best practices of the trade.

(b) Application Site Mixing, Thinning and Storage of Coating Materials:

(1) Rejection - The container contents will be rejected, and shall not be used if:

- The material arrives at the application site in other than original, unopened containers.
- The container has a break in the lid seal or a puncture.
- The coating materials have begun to polymerize, solidify, gel or deteriorate in any other manner.
- The recommended shelf life, as stated in the manufacturer's product data sheets, has expired.
- A skin forms on the surface of the material or on the sides of the container and the volume of the skin exceeds 2% of the material. If there is not more than 2% skin, remove and discard only the skin.

(2) Mixing - Thoroughly mix coating materials by mechanical means to insure a uniform composition. Do not mix coating materials by means of air stream bubbling or boxing. Mix in the original container and continue until all pigment or metallic powder is in suspension. Take care to insure that any solid coating material that may have settled to the bottom of the container is thoroughly dispersed. After mixing, inspect the coating materials for uniformity and to insure that no unmixed pigment or lumps are present.

Add separately packaged catalysts, curing agents, hardeners, initiators or dry metallic powders to the base coating material only after the base coating material is thoroughly mixed to achieve a uniform mixture with all particles wetted. Add the proper volume of curing agent to the correct volume of base with constant agitation. Use the mixture within the pot life specified by the manufacturer. Discard unused portions at the end of each workday.

(3) Thinning - Do not add additional thinner at the application site unless approved by the Engineer. The amount and type of thinner, if allowed, shall conform to the manufacturer's specifications.

(4) Straining - Strain all coating materials after mixing to remove undesirable matter, but not pigment or metallic powder.

(5) Agitation - Constantly agitate coating materials as recommended by the manufacturer, and all inorganic zinc primers during application, using paint pots equipped with mechanical agitators.

(6) Storage - The coating material and solvents shall be stored in original containers. Storage shall be in a weather-tight space where the temperature is maintained between 40 degrees F and 100 degrees F or per manufacturer recommendations, whichever is more restrictive.

(c) Application of Coating:

(1) Surface Condition - Ensure that the surface to be coated is free of moisture, dust, grease or other substance which would prevent the bond of succeeding applications. Protect freshly coated surfaces from contamination by abrasives, dust or foreign materials from any source. Prepare contaminated surfaces to the Engineer's satisfaction before applying succeeding coats.

(2) Application Methods - Apply coating materials by air or airless spray, brush, roller, any combination of these methods, or as recommended by the coating material manufacturer unless otherwise specified. Regardless of which application method is used to apply the coating, brushes shall be used to push the coating into complex details, crevices, gaps, difficult to access areas and areas where spraying does not adequately cover or penetrate. All application techniques shall conform to Section 7, SSPC-PA 1.

Apply each coat in a uniform layer, completely covering the preceding coat. Each individual coat shall be furnished by the manufacturer in a sufficiently different shade so that skips and holidays can be easily detected. Do not tint the coating material in the field unless approved. Correct runs, sags, skips or other deficiencies before application of succeeding coats. Such corrective work may require recleaning, application of additional coating, or other measures as directed, at no additional compensation.

(d) Coating Requirements:

(1) Number of Coats and Film Thickness - Apply all coats to the minimum thickness specified in the manufacturer's product data sheet for the coating. Apply the coating system in as many coats as specified in the QPL with each coat consisting of as many applications as necessary to cover the work and achieve the minimum thickness specified for the coat.

Apply only galvanizing or a coating of zinc primer to all steel-to-steel and steel-to-concrete contact surfaces, whether in the shop or field. The dry film thickness shall not be less than 3 mils nor more than the manufacturer's class "B" certification allows. Do not assemble coated joints before the coatings have cured for at least the time used in the qualifying test, or as recommended by the manufacturer.

On steel-to-wood contact surfaces, apply all coatings specified.

(3) Coating Thickness and Coverage Requirements - Coating thickness measurements will be made by the Engineer after the application of each coat and before application of the succeeding coat. In addition to coating thickness measurements, a visual inspection for complete coverage will be made by the Engineer after each coat. Apply each coat in sufficient thickness to achieve uniform and complete coverage and appearance. If all

thickness measurements are not within the specified minimum dry film thickness, or if the visual inspection does not satisfy the Engineer, make additional applications, as necessary, to meet the thickness and coverage required. Film thickness will be measured above the peaks of the profile of the anchor pattern in the metal substrate.

The dry film thickness will be measured for acceptance using a type 2 gauge according to SSPC PA2 as modified by this specification. The frequency of measurements will be based on the following:

- A single gauge reading will be taken for each 10 SF of surface area.
- A spot measurement is only taken at locations where a gauge reading is less than 100% of the Project specified minimum DFT.
- All spot measurements shall meet 100% of the project specified minimum DFT.
- Additional readings may be required to identify the limits of the non-compliant areas.

If a question arises about an individual coat thickness or coverage, it will be verified using a Tooke gauge, according to ASTM D4138. If the Tooke gauge shows a prime coat to be less than the specified minimum thickness, or reveals a missing intermediate coat, the total coating system will be rejected even if the thickness of the total system equals or exceeds total specified thickness.

(4) Additional Top Coat Requirements - Apply the top coat, regardless of the total thickness of prime and intermediate coats, in sufficient thickness to achieve the minimum required topcoat thickness, as well as, a uniform and complete coverage and appearance.

(e) Time of Application – All surfaces shall be dry before priming. Apply each coat over the preceding coat as soon as possible, allowing for drying time of the preceding coat, weather, temperature, and similar factors, as well as the manufacturer's recommendation.

(f) Caulking - Apply the caulk after complete application of the top coat. Fill and seal crevices and gaps between structural shapes and plates, around bolt heads or nuts, and similar areas that would retain moisture with:

- Caulk, if the crevice or gap cannot be filled with coating materials.
- Caulk – In areas that collect or channel water, apply caulk even if coating fills the gap.
- Backing material and caulk to fill the crevices and gaps that exceed ¼". Apply caulk over the backing material to form a watertight seal.

(g) Adhesion - Minimum adhesion shall be 350 psi within one week of application of each coat to its substrate. The Engineer will perform adhesion tests according to ASTM D4541, using Test Method B.

(h) Environmental Conditions - Apply coating materials only during periods when, according to testing by ASTM E337, the:

- Air temperature is above 45 °F
- Steel surface temperature is:
Greater than 45 °F
Less than 115 °F
At least 5 °F above the dew point
- Relative humidity is within the manufacturer's recommended range

Application of coating materials will not be allowed if the Engineer determines that conditions are not favorable for proper application and performance of the coating.

If fresh coatings are damaged by the elements, replace or repair at no additional cost to the Agency.

If a coating system allows application in environmental conditions different from those specified, submit a letter from the manufacturer stating the conditions under which the coatings can be applied. Application under conditions other than specified will not be allowed without the Engineer's written approval.

Cover and protect the metal if coating is to be applied in adverse weather conditions. Heat the metal and surrounding air to the temperature specified in this subsection. Continue protecting the newly coated steel until the coating achieves proper cure.

00594.43 Inspection - The Engineer will inspect each phase of preparation and coating. Do not proceed with succeeding phases until approved. Provide the inspector timely access to areas where work is being performed. Allow adequate time for inspection at each hold point. Hold points shall be provided at the following times:

1. Before cleaning operations begin.
2. After cleaning operations are completed and before application of any coating materials.
3. After each stripe coat.
4. After each full coat.
5. After cleaning in conjunction with coating repairs.
6. After application of each coat in coating repairs.
7. After application of last coat, before moving work platforms and containment structures.

Repair coating system damages resulting from Agency inspection and testing at no cost to the Agency.

Aspects of the preparation and coating process to be inspected and tested include, but are not limited to:

Test	Test Method
Environmental conditions for coating	ASTM E337
Cleanness of abrasive material.....	ODOT TM 616
Ionic contamination of abrasive material.....	ASTM D4940

Cleanness of compressed air	ASTM D4285
Pictorial Surface Preparation StandardsSSPC-VIS 1, 3, 4 & 5	
Surface profile by Keane -Tator Comparator	ASTM D4417
Surface profile by replica tape	ASTM D4417
Wet film thickness.....	ASTM D4414
Dry film thickness by magnetic gauge... SSPC-PA2 (modified)	
Dry film thickness by Tooke gauge	ASTM D4138
Pull-off strength of coating.....	ASTM D4541 (method B)

00594.44 Protection against Damage:

(a) Contaminated Surfaces - If the prepared surface becomes contaminated by any material, other than rust, at any time, clean the surface in a manner satisfactory to the Engineer before making the succeeding application. If the prepared surface becomes contaminated by rust at any time, prepare the contaminated area again according to 00594.41 and recoat with all specified coats. Clean, re-prepare and recoat at no cost to the Agency.

(b) Surfaces Not to Be Coated - Protect surfaces not to be coated under the Contract from blast-cleaning, overspray and drippings. Remove or repair unintended coatings or other damage on these surfaces to the Engineer's satisfaction at no cost to the Agency.

Do not clean or coat galvanized steel members such as ladders, safety rails and stanchions unless otherwise directed in the Special Provisions. Protect them from damage during preparation and application operations. Repair damaged galvanizing at no additional cost to the Agency.

Protect navigation lights and conduits. If navigation lights or lenses are damaged by the preparation or coating operations, immediately repair or replace at no additional compensation. Keep navigation lights operating and visible during the hours of darkness.

(c) Handling, Shipping or Surface Damage - Exercise care in moving or handling steel in the shop, during shipping and during erection. Do not move or handle coated steel until the coating has cured.

Repair marred or damaged coated surfaces at no cost to the Agency, with the same materials and to the same condition as specified. At the completion of all work, the coating shall be complete and the surfaces shall be undamaged and clean.

(d) Other Damage - Prevent, at no cost to the Agency, damage resulting from preparation and coating work, including:

- Damage to marine or vehicular traffic or harm to pedestrians in the vicinity of the work
- Abrasive material or debris falling into an area which would create a traffic hazard
- Damage to the bridge substructure, superstructure or motorized equipment
- Damage to other property as a result of the Contractor's operations

00594.60 Repair of Damaged and Unacceptable Coatings - Repair damaged surfaces and surfaces not in compliance with requirements of 594.42 as follows:

(a) Surface Preparation - Repair localized damage, corrosion, and unacceptable coatings.

Areas exhibiting coating defects down to the metal substrate, whether exhibiting visible corrosion or not, shall be prepared per SSPC-SP10. If approved by the Engineer, small areas shall be prepared per SSPC-SP15 so as to not damage adjacent areas. The prepared area shall extend at least 2 inches into adjacent tightly adhering, intact coating.

Areas exhibiting coating defects which do not extend down to the metal substrate shall have all loose, delaminating, non-intact, non-sound coating, or otherwise defective coating removed down to sound, still performing coating. The prepared areas shall extend at least 2 inches into adjacent tightly adhering, intact coating.

(b) Feathering of Repair Areas - Feather the existing coating system surrounding each repair location. Feather a distance of 1 inch to 2 inches to provide a smooth, tapered transition into the existing intact coating.

Verify that the edges of coating around the periphery of the repair areas are tight and intact by probing with a putty knife according to SSPC-SP 3. Roughen the existing coating in the feathered area to ensure proper adhesion of the repair coats overlap the intact, still sound surfaces at least 2 inches.

(c) Coating Application in Repair Areas – Use the procedure in this subsection for all repairs. When the bare substrate is exposed in the repair area, apply all coats of the system to the specified thicknesses.

When the damage does not extend to the bare substrate, apply only the affected coats.

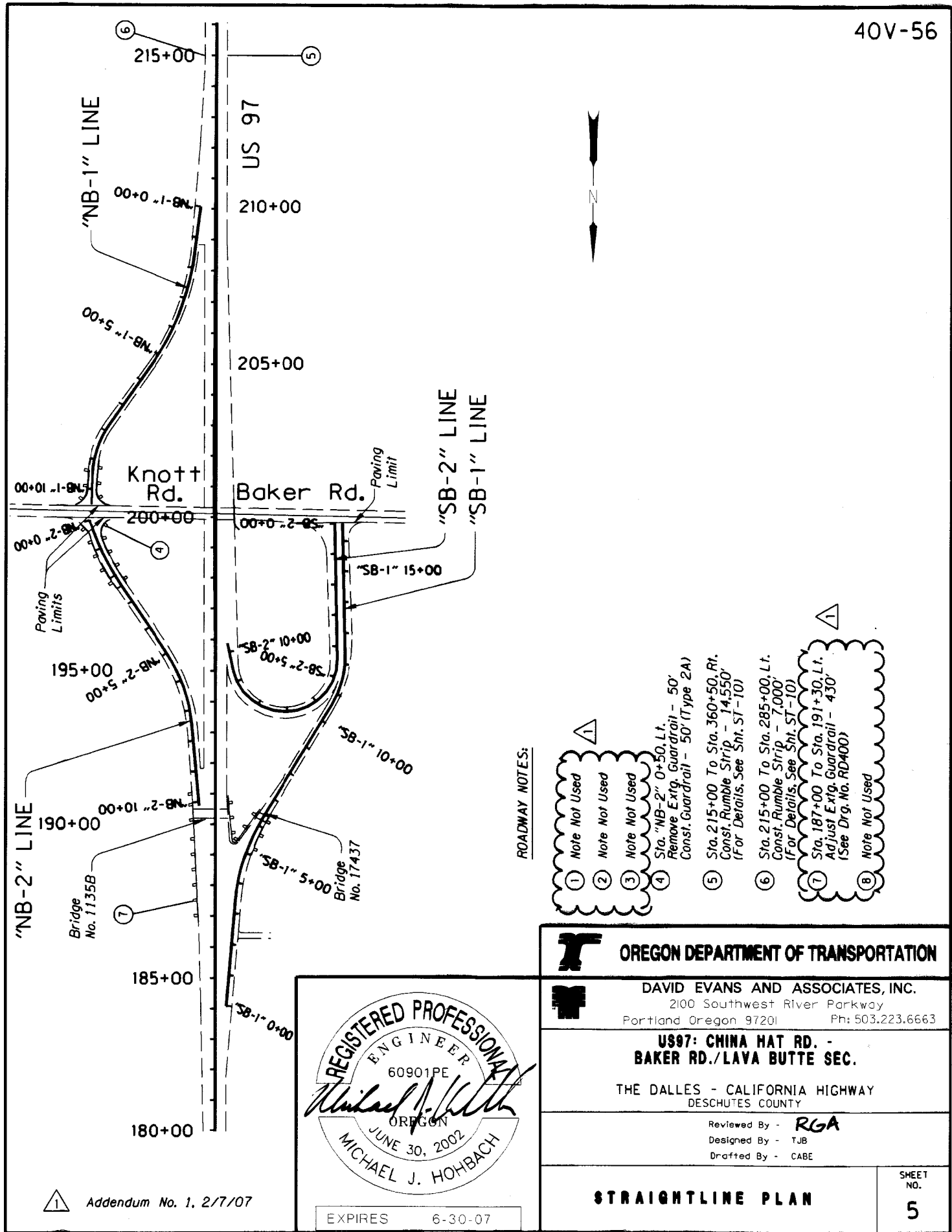
Maintain the thickness of the system in overlap areas within the specified total thickness tolerances and overlap the intact, sound existing coating at least 2 inches.

Measurement

00594.80 General - No separate measurement will be made for work done under this Section.

Payment

00594.90 General - No separate payment will be made for preparing and coating new metal work, as payment for all preparing, coating and incidental items, including correction of damages according to 00594.44, will be included in the payment for furnishing and placing the new metal according to 00930.90.



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 OREGON
 JUNE 30, 2002
 MICHAEL J. HOHBACH
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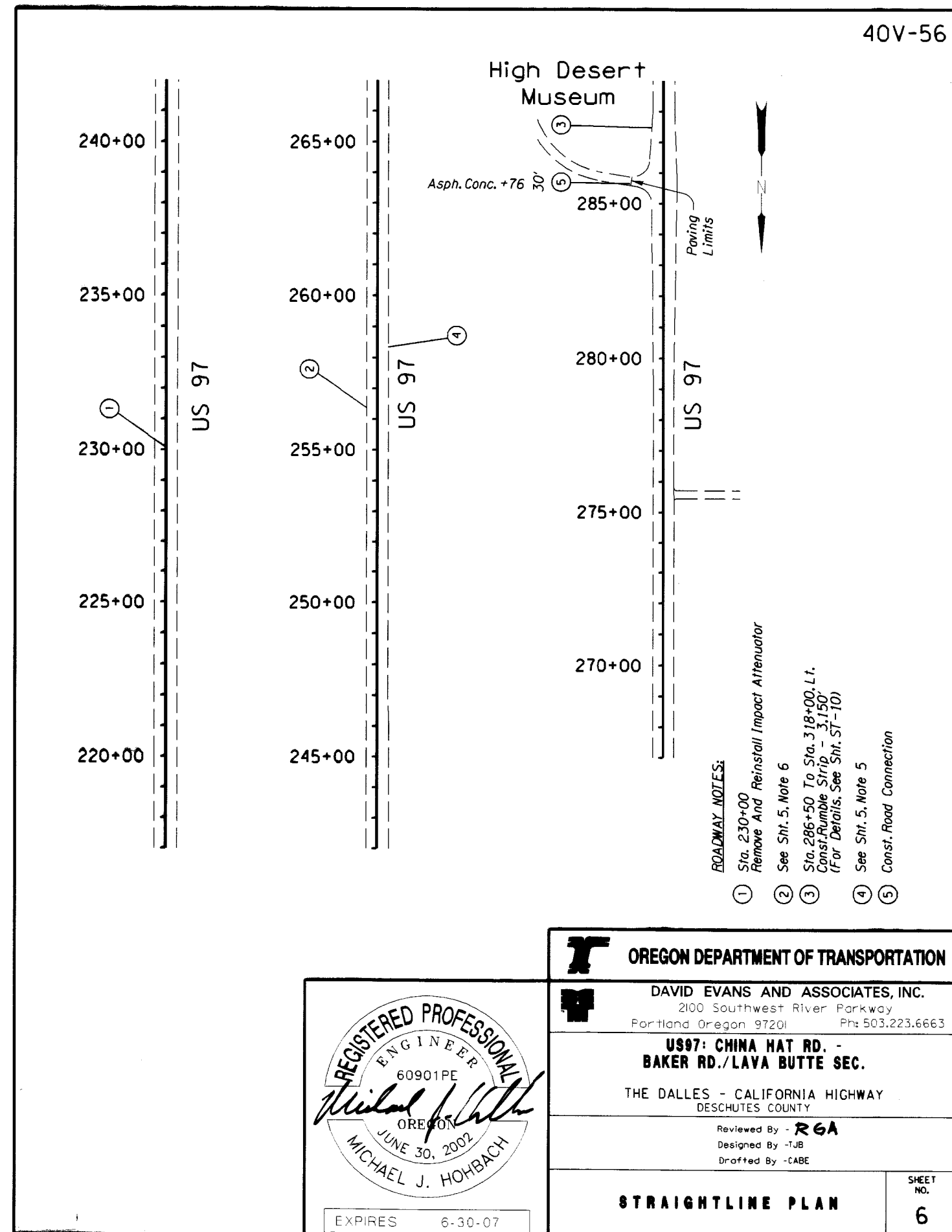
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THE DALLES - CALIFORNIA HIGHWAY
 DESCHUTES COUNTY

Reviewed By - **RGA**
 Designed By - TJB
 Drafted By - CABE

STRAIGHTLINE PLAN SHEET NO. **5**

⚠ Addendum No. 1, 2/7/07



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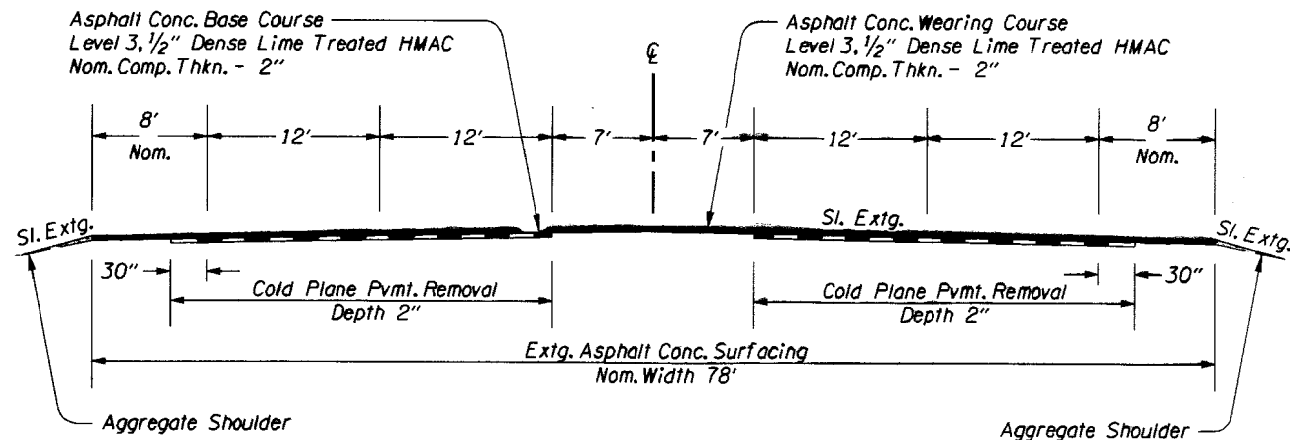
DAVID EVANS AND ASSOCIATES, INC.
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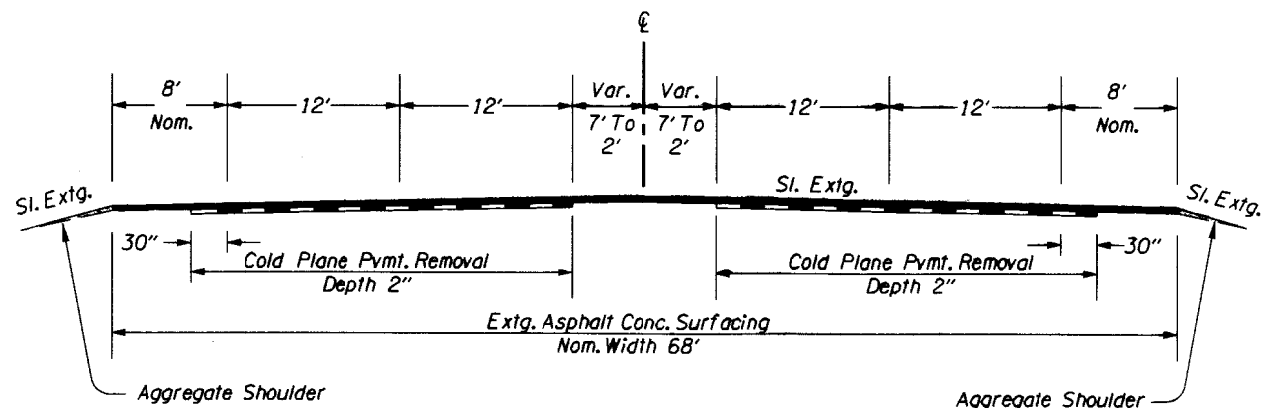
THE DALLES - CALIFORNIA HIGHWAY
 DESCHUTES COUNTY

Reviewed By - **RGA**
 Designed By - TJB
 Drafted By - CABE

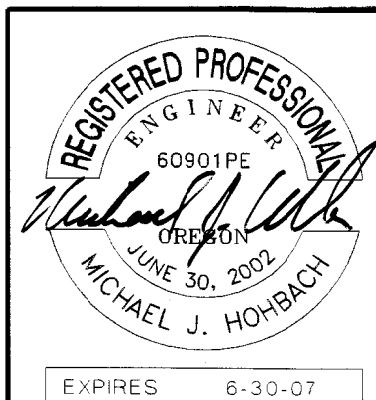
STRAIGHTLINE PLAN SHEET NO. **6**



STA. 281+27 To STA. 286+30



(For Surfacing Details Not Shown, See Section Above)
STA. 286+30 To STA. 289+30 (Taper Section)



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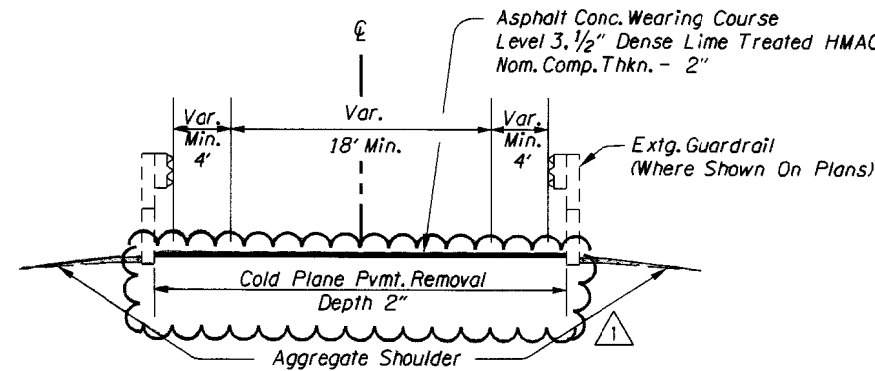
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DESCHUTES COUNTY

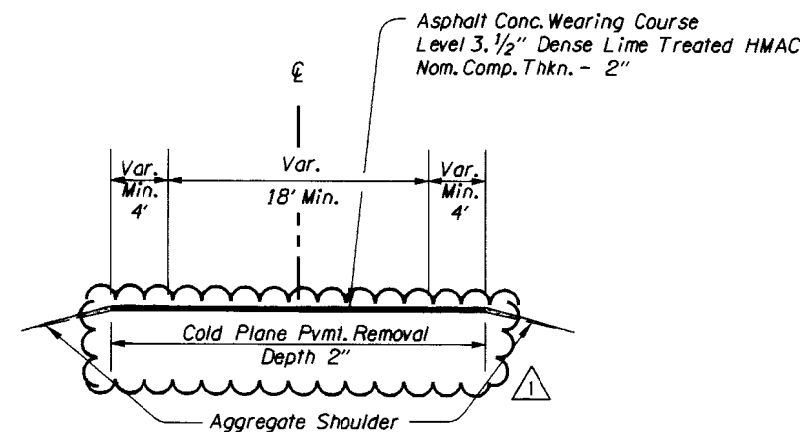
Reviewed By - **RGA**
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Drafted By - CABE

TYPICAL SECTION SHEET NO. **2A-12**

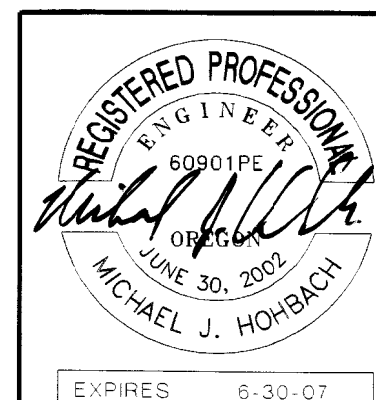
EXPIRES 6-30-07



STA. \"NB-1\" 0+00 To Sta. \"NB-1\" 10+50
\"NB-2\" 0+00 To \"NB-2\" 10+12



STA. \"SB-2\" 0+00 To Sta. \"SB-2\" 10+28



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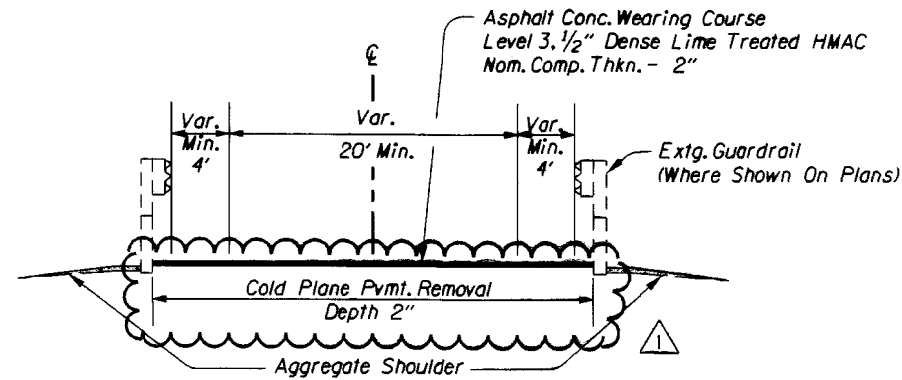
THE DALLES - CALIFORNIA HIGHWAY
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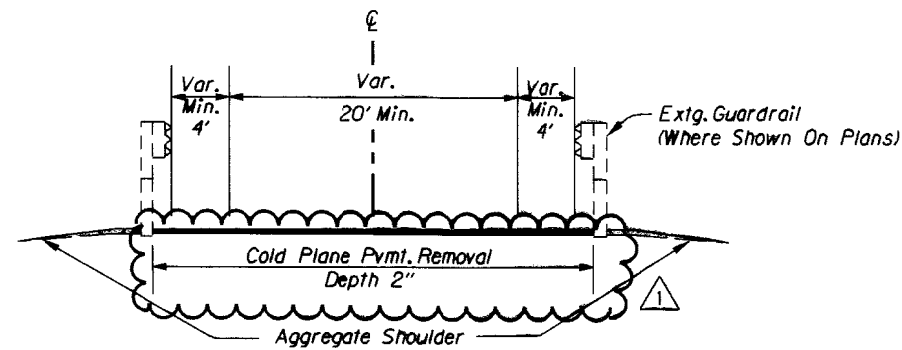
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EXPIRES 6-30-07

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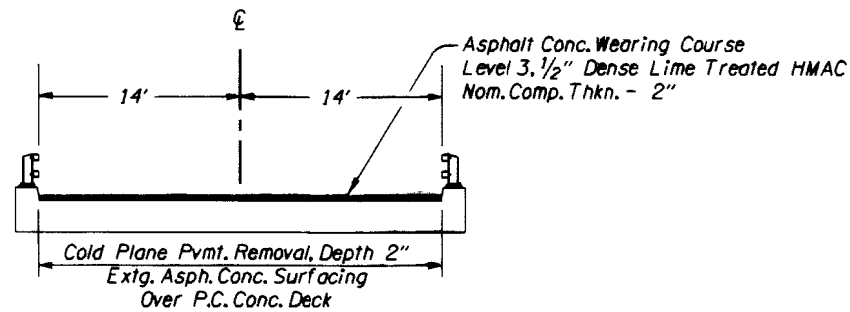


STA. "SB-1" 0+00 To Sta. "SB-1" 5+20
"SB-1" 7+40 To "SB-1" 16+58



(For Surfacing Details Not Shown, See Section Above)

STA. "SB-1" 5+20 To Sta. "SB-1" 6+20
"SB-1" 6+40 To "SB-1" 7+40



STA. "SB-1" 6+20 To Sta. "SB-1" 6+40 (Bridge No. 17437)

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THE DALLES - CALIFORNIA HIGHWAY
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TYPICAL SECTION

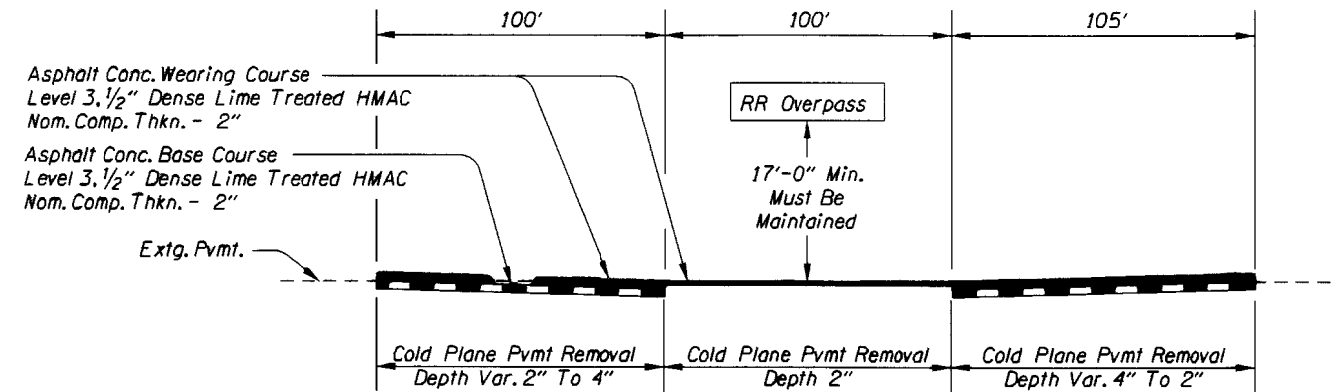
SHEET NO. **2A-14**

EXPIRES 6-30-07

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Addendum No. 1, 2/7/07



OVERLAY/INLAY AT RR OVERPASS

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THE DALLES - CALIFORNIA HIGHWAY
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DETAILS

SHEET NO. **2B**

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