

WYOMING DEPARTMENT OF TRANSPORTATION  
2003 STANDARD SPECIFICATIONS FOR  
ROAD AND BRIDGE CONSTRUCTION  
SPECIAL PROVISIONS

FOR  
PROJECT NO. BROS 0.00 0C18005  
BRIDGE OVER INYAN KARA CREEK  
CR 268  
CROOK COUNTY

Use the following link to access  
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INDEX

SUPPLEMENTARY DOCUMENTS

NUMBER      NAME

E-104B      REPORTING BID RIGGING ACTIVITIES  
E-110      NOTICE TO PROSPECTIVE FEDERAL-AID CONSTRUCTION CONTRACTORS  
PR-1273      REQUIRED CONTRACT PROVISIONS, FEDERAL-AID CONSTRUCTION CONTRACTS  
\*      WAGE COMPLIANCE REQUIREMENTS  
\*      WAGE DETERMINATION DECISION

SPECIAL PROVISIONS

SP-100RV      CONSTRUCTION REQUIREMENTS  
SP-500ES      RAIL POST CORRECTION

SUPPLEMENTARY SPECIFICATIONS

SS-100A      AMENDMENTS TO THE DIVISION 100 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION  
SS-100E      SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES AND TRAINING  
PROVISIONS  
SS-100F      DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION  
SS-100J      FUEL ADJUSTMENT  
SS-100K      ADJUSTMENT FOR STRUCTURAL STEEL  
SS-200A      AMENDMENTS TO THE DIVISION 400 OF THE 2003 STANDARD SPECIFICATIONS FOR  
ROAD AND BRIDGE CONSTRUCTION  
SS-300A      AMENDMENTS TO THE DIVISION 400 OF THE 2003 STANDARD SPECIFICATIONS FOR  
ROAD AND BRIDGE CONSTRUCTION  
SS-400A      AMENDMENTS TO THE DIVISION 400 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION  
SS-400D      CONTROL OF AGGREGATE GRADATION  
SS-500A      AMENDMENTS TO THE DIVISION 500 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION  
SS-500B      WELDER QUALIFICATION  
SS-500E      BRIDGE BEARING CORRECTION  
SS-600A      AMENDMENTS TO THE DIVISION 600 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION  
SS-700A      AMENDMENTS TO THE DIVISION 700 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION  
SS-700F      TRAFFIC CONTROL SUPERVISOR  
SS-800A      AMENDMENTS TO THE DIVISION 800 OF THE 2003 STANDARD SPECIFICATIONS FOR ROAD  
AND BRIDGE CONSTRUCTION

WATER AGMT. NO.      WATER SOURCE

57335      INYAN KARA CREEK

WYOMING DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
CONSTRUCTION REQUIREMENTS

Project No.  
0C18005  
Bridge Over Inyan Kara Creek  
Crook County

REFERENCE: The 2003 Edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

Do not work, mobilize equipment, or store materials on the project site prior to June 8, 2009.

Return the roadway to normal unrestricted traffic flow by August 7, 2009.

Once work commences, and either the structure or the roadway is disturbed, there will be a 40 calendar day window to return the road to normal unrestricted traffic flow.

Liquidated damages in the amount of \$1000 will be assessed for each calendar day after the 40 calendar day window ends, or after August 7, 2009, whichever comes first, until the roadway is permanently opened to unrestricted traffic flow.

The liquidated damages specified herein are in addition to the liquidated damages assessed for failure to complete all contract work by the contract completion deadline.

11-26-08

WYOMING DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
RAIL POST CORRECTION

Project No. 0C18005  
Bridge over Inyan Kara Creek  
County Road 268  
Crook County



**REFERENCE:** The 2003 Edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**DESCRIPTION:** This work consists of placing epoxy-resin material in gaps between rail post plates and concrete curb, in accordance with the contract.

**MATERIALS:** Ensure crack and port sealing material is a two-component, structural epoxy paste adhesive conforming to ASTM C-881, Type I, Grade 3, Class B or C.

Ensure epoxy-resin injection material is a two-component, epoxy resin adhesive conforming to ASTM C-881, Type IV, Grade 1, Class B or C.

Use Class B if temperature is 40 °F to 60 °F.  
Use Class C if temperature is over 60 °F.

**CONSTRUCTION:** Place injection ports at the small end of the void. Seal all edges of the void between the rail post plate and the concrete and around the injection ports with crack and port sealing material as recommended by the manufacturer. Puncture a  $\frac{1}{8}$  inch diameter vent hole in the crack and sealing material at the corners on the opposite side of the injection ports.

After the crack and sealing material has cured, inject the void with epoxy-resin injection material as recommended by the manufacturer. Continue injection until neat epoxy-injection material flows out of the vent holes in the corners. Plug the injection ports and the vent holes.

After the epoxy-injection material has cured, trim off all protruding injection ports and epoxy-resin injection material, leaving a smooth, neatly finished surface.

All work and materials will be incidental to the Bridge Railing pay item.

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 100 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict with, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's Standard Specifications for Road and Bridge Construction.

## **Section 101 Definition and Terms**

### **Subsection 101.5 Definitions**

*Add the following to the definition of Contract:*

1.11. Electronic CADD Files. Files in native Microstation and Geopak format used by the department. Files may be version specific. Conversions to other formats will not be performed by the department, and Microstation and Geopak support is not provided.

As appropriate, electronic CADD files may include:

- 1.11.1. Project COGO database (.gpk)
- 1.11.2. Design Mainline Cross Sections (\_xsd.dgn)

## **Section 103 Award and Execution of Contract**

### **Subsection 103.5.2 Measurement and Payment**

*Replace the first sentence of paragraph 1 with:*

<sup>1</sup> When the department includes the cost for the performance bond as a pay item in the contract. The department...

*Add the following to the end of paragraph 1:*

When performance bond is not included as a pay item in the contract, include the cost for the performance bond in the item mobilization. The department will make a one time increase to the calculated mobilization retainage by five percent.

*Add the following pay item to paragraph 3:*

<b>Pay Item</b>	<b>Pay Unit</b>	<b>Measure to the Nearest</b>	<b>Pay to the Nearest</b>
Mobilization	LS	LS	LS

**Subsection 103.6 Execution and Approval of Contract**

*Add Form E-12, Fuel Adjustment Affidavit to paragraph 1.*

**Section 104 Scope of Work**

**Subsection 104.2.7.3 Written Notice, by Contractor**

*Modify the first sentence of paragraph 1, to read as follows:*

Provide a written notice within five working days of the first notice. Include the following:

**Section 105 Control of Work**

**Subsection 105.4 Coordination and Precedence of Documents in the Contract**

*Add the following item to paragraph 1:*

11. Electronic CADD Files.

*Add the following paragraph:*

<sup>4</sup> Paper documents take precedence over electronic files.

**Subsection 105.5 Superintendence**

*Revise paragraph 1 to read as following:*

In writing, and in accordance with Subsection 108.3.3, Preconstruction Conference, the department requires the contractor to designate a project superintendent who is an employee of the contractor, and with the following;

*Remove the last sentence of paragraph 2.*

## **Section 106 Control of Material**

### **Subsection 106.3.2.2 Available Material Sources**

*Add to paragraph 2, subparagraph 1 the following:*

#### 1.10. Royalty

*Modify paragraph 2, subparagraph 2,*

Remove 2.2. Royalty

### **Subsection 106.3.3.1 General**

*Add the following item to the list of requirements:*

6. Submitting an acceptance statement signed by the landowner stating that all conditions and stipulations in the agreement have been met.
7. Royalty when the contract allows and the contractor elects to use a department furnished source as a contractor-furnished source.

### **Subsection 106.3.3.2 Environmental Requirements**

*Modify paragraph 1 to read as follows:*

<sup>1</sup> If the proposed site, source, or associated haul road is not or has not been commercially active, obtain and give the engineer copies of the following documents and clearances. The engineer will review the documents and provide a written response within 30 calendar days of receipt of information.

*Modify paragraph 1 by replacing Section 3 with the following:*

3. Documents reflecting the proposed activity's socioeconomic, cultural, natural, or physical impacts and the approved mitigation plans, as appropriate. For all proposed activities provide:
  - 3.1 A completed copy of the department's "Environmental Impact Evaluation" (Form E-15), summarizing the findings.
  - 3.2 A copy of the class III cultural resource inventory report, to be completed by a qualified archaeologist. Include documentation of findings meeting Wyoming State Historic Preservation Office standards, evaluations of

eligibility to the National Register of Historic Places, and determination of no effect or no adverse effects by the proposed activity to any cultural resources located. The department will deny all requests if the cultural resource inventory report has a determination of anything other than no effect or no adverse effects.

- 3.3 A copy of the wetlands report if wetlands are located in or near the area.
- 3.4 A copy of the Army Corps of Engineers permit, if required.
- 3.5 A copy of the biological assessment if endangered, threatened, or proposed species, as defined in the Endangered Species Act of 1973, are present in or near the area. The biological assessment must result in a determination of no effect or not likely to adversely affect for all endangered, threatened, and proposed species in or near the area. If the biological assessment results in a may affect, likely to adversely affect determination, the department will not approve the change. The contractor must agree to and implement the terms and conditions of the current Programmatic Biological Opinion issued by the United States Fish and Wildlife Service on November 7, 2005.
- 3.6 A copy of approved mitigation plans, as stipulated in permits from the appropriate regulatory agency.

## **Section 107 Legal Relations and Responsibility to the Public**

### **Subsection 107.5 Employee Health and Safety**

*Add the following paragraph:*

<sup>2</sup> Do not operate equipment within 500 feet of survey or testing personnel. Move equipment to another location. If equipment cannot be moved, provide flagging for the protection of all survey and testing personnel as approved by the engineer. The department will pay for flagging in accordance with Subsection 703.05 MEASUREMENT and PAYMENT.

*Add the following Subsection:*

### **Subsection 107.8.3 Vehicle Damage Claims**

If a vehicle owner makes a claim of vehicle damage, send a written response to the claimant addressing the claim and the actions that will be taken. Send a copy of the response letter to the following address:

State of Wyoming  
Department of Administration and Information  
ATTN: Risk Manager  
611 West 20th Street  
Cheyenne, WY 82001

### **Subsection 107.11.1 General**

*Add the following sentence to the beginning of paragraph 1:*

In each area traffic has been restricted from normal flow, work continuously until complete; return traffic to normal unrestricted flow immediately after completion of the work. Work in a...

### **Subsection 107.13.3 Safety**

*Add the following paragraph:*

<sup>2</sup> Before beginning any work, or a major change in operation, schedule a safety conference with the engineer at a mutually agreeable time to discuss safety issues and policies. Ensure that appropriate subcontractors attend the conferences.

### **Subsection 107.13.4 MEASUREMENT and PAYMENT**

*Remove paragraphs 1 & 2. Replace with the following paragraph:*

<sup>1</sup> The department will measure and pay for work required to locate utilities as force account work in accordance with Subsection 109.4.4, Force Account.

## **Section 108 Prosecution and Progress**

### **Subsection 108.1.1 Contractor's Required Participation**

*Replace the second sentence of paragraph 1 with the following sentences:*

...obligations. Perform work equaling at least 30 percent of the value of the original contract amount. Purchasing materials or placing employees on contractor's payroll for subcontracted work will not be considered as part of the 30 percent. In...



### **Subsection 108.3.3 Preconstruction Conference**

*Modify paragraph item 6 to read as follows:*

6. Copy of the training plan and list of company trainees;

### **Subsection 108.6.6 Working Day Extensions for Adverse Weather**

*Remove paragraph 3.*

## **Section 109 Measurement and Payment**

### **Subsection 109.3.1 General**

*Add the following paragraph 3:*

<sup>3</sup> The department will reimburse the contractor for increases in material costs for overruns of plan quantity for: corrugated metal pipes, steel piling, dowel bars, tie bars for concrete pavement, corrugated guardrail, wood and steel posts for guardrail, reinforced concrete pipes, geotextiles, geogrid, paving fabric, wood and steel fence posts, fence wire, seed and mulch.

*Revise items for pay adjustment under paragraph 3 to read as follows:*

To qualify for a price adjustment the following will apply:

1. Order materials any time after the award of the contract and within the time period indicated in the quote. The engineer will notify the contractor in writing of any known quantity changes by the award date. Otherwise use quantities shown in the contract.
2. Take delivery of materials and provide for handling and storage of materials.
3. Provide the engineer with confidential prices and proof that the order was placed within the time indicated in the quote, for the above mentioned products at the pre-construction conference. Ensure the information submitted contains the bid item number on all price quotes. If information is not submitted at the preconstruction conference, no price adjustments will be made.
4. Materials cannot have a fixed price.

5. The original contract or adjusted quantity, as described above or by contract amendment, overruns by more than 25 percent. In which case a price adjustment will be to the quantity over 100 percent, or
6. The original contract or adjusted quantity as described above or by contract amendment, overruns and the price of material changes by more than plus or minus 15 percent from the confidential quote submitted at the preconstruction conference. In which case a price adjustment will be to the quantity over 100 percent.

Notify the engineer when an overrun of a qualifying item appears necessary.

Obtain three competitive price quotes from suppliers on WYDOT Form E-18, Supplier's Quote for Adjustment. Submit Form E-18 to the engineer within three working days of notification.

If Form E-18 is not submitted within the time specified no adjustment to the unit price will be made.

The engineer will:

1. Use the lowest quote to determine if an adjustment is required.
2. Determine the new unit price by taking the original unit bid price or price amended by contract amendment, subtracting the original material cost submitted at the preconstruction conference, or time of contract amendment and adding the new material cost.
3. Notify the contractor in writing as to whether the material qualifies for a price adjustment.
4. Pay for overrun quantity under a new bid item reflecting the new unit cost and overrun quantity.

Notify the department in accordance with Subsection 104.2.7, Contractor-Engineer Notification, within 10 calendar days if the engineer's decision is not acceptable.

#### **Subsection 109.4.4 Force Account**

*Replace 7.1 Minor Work with the following:*

7.1. Minor Work. The value of force account work performed as invoice work will not be allowed to exceed 100 percent of the dollar value established in the contract for the pay item Force Account Work. No single invoice or type of work will be allowed to exceed 50 percent of the dollar value established in the contract for the pay item Force Account Work.

*Remove the second sentence from Subsection 7.2 Specialist Work.*

### **Subsection 109.6 Payment for Material on Hand**

*Add the following sentence to the end of section 1, Purchased Materials:*

The engineer may exceed the 65 percent limit if adequate documentation can be provided.

## **Section 111 Environmental Requirements**

### **Subsection 111.3.3 Payment**

*Add the following paragraph:*

<sup>2</sup> Disturbances less than one acre [1047 m<sup>2</sup>] that do not require a permit will not require a SWPPP and will be eliminated in accordance with Subsection 109.3.2, Eliminated or Unused Pay Items.

## **Section 113 Acceptance**

### **Subsection 113.1 Acceptance of Aggregate**

*Modify the first sentence of paragraph 1 to read as follows:*

<sup>1</sup> The department will accept the gradation of crushed or screened aggregates used for pavements, bases, subbases, chip seals, and stockpiled materials with a .....

*Replace the last sentence of paragraph 2 with the following:*

Only the PL (percent within lower limits) will be calculated for the sieve designations requiring 90 to 100 percent passing and, the P<sub>u</sub> (percent within upper limits) will be set at 100.

*Add the following equation to paragraph 7, step 1:*

$$\bar{x} = \frac{\sum x}{n}$$

*Replace the last sentence of paragraph 7, step 5 with the following:*

If an  $SL_u$  is not specified or if the upper specification limit for the sieve being evaluated is 100 percent,  $P_u$  is 100.

*Add the following as paragraph 8:*

<sup>8</sup> Testing frequency indicates the minimum number of tests required for the specified quantity of aggregate produced. For example, 1/1000 ton is equivalent to one test minimum required for each 1000 tons of aggregate produced.

### **Subsection 113.2 Acceptance of Asphalt Materials**

*Remove the word Nonspecification from paragraph 2, Item #3.*

### **Subsection 113.3 Unacceptable Work and Materials**

*Add the following paragraph:*

<sup>4</sup> The engineer may isolate and reject obviously defective material without regard to testing procedures.

## **Section 114 Laboratory, Personnel, and Correlation**

### **Subsection 114.3.1 General**

*Replace paragraph 3 with the following:*

<sup>3</sup> All test results are to be reviewed and signed by a certified technician.

01-06-04

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES  
AND TRAINING PROVISIONS

I. DESCRIPTION

The requirements set forth in this Supplementary Specification supplements the equal employment opportunity requirements set forth in the Required Contract Provisions, Federal-Aid Construction Contracts. The Required Contract Provisions Federal-Aid Construction Contracts and this Supplementary Specification constitute the specific affirmative action responsibilities for project activities under this Contract.

This Supplementary Specification supplements, amends, and where in conflict therewith, supersedes Subsection 110.02, Equal Employment Opportunity of the 2003 Standard Specifications.

II. AUTHORITY

Authority for this Supplementary Specification is set forth and imposed pursuant to the required Contract Provisions for all Federal Aid Construction Contracts and

Federal Regulations:      23 CFR Part 230  
   41 CFR Part 60-3  
   41 CFR Part 60-4  
   49 CFR Part 23 as amended and Part 26

III. DEFINITIONS

A. Disadvantaged Business Enterprise (DBE), Minority Business Enterprise (MBE), or Woman Business Enterprise (WBE):

For the purposes of this Supplementary Specification, MBE and WBE are collectively defined as disadvantaged business enterprise (DBE).

A minority business enterprise (MBE), by definition, is a small business concern, as defined pursuant to Section 3 and 8(d) of the Small Business Act and implementing regulations, which is at least 51 percent owned and controlled by socially and economically disadvantaged Black Americans, Hispanic Americans, Portuguese Americans, Asian Americans, American Indians and Alaskan Natives.

A woman business enterprise (WBE), by definition, is a small business concern as defined by Section 1101 (b) (2) (B) of the 1998 Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) and is at least 51 percent owned by one or more women, or in the case of a publicly owned business, 51 percent of the stock is owned by women, and the management and daily business operations are controlled by one or more of the women who own the firm.

"Socially and Economically Disadvantaged Individuals" means those individuals who are citizens of the United States (or lawfully admitted permanent residents) and who are Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, or Asian-Indian Americans, Females, and any other minorities or individuals found to be disadvantaged by the Small Business Administration pursuant to Section 8(a) of the Small Business Act.

- B. Covered Area: The geographical area in the State of Wyoming, county and city (if any) described on the form "Proposal for Highway Construction" from which this Contract resulted.
- C. Employer Identification Number: The Federal Social Security Number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

#### IV. EEO STAFF

Designate the following EEO positions:

- A. A DBE Liaison Officer to administer a program designed to enable DBE's to be considered fairly as subcontractors and suppliers under this Contract.
- B. A responsible company official to submit reports relating to the provisions hereof as may be required by the Federal government and to keep records. If appropriate, the Company may designate one individual to administer all of the company's EEO responsibilities.

V. TRAINING AND PROMOTION

Training will be evaluated as part of the contract compliance procedures and in accordance herein. Failure to have adequate trainee representation within the Overall Company Workforce may result in a determination of non-compliance and the Company may be referred to the Office of Federal Contract Compliance (OFCCP).

As part of the overall company affirmative action program, on-the-job training shall be aimed at upgrading minorities and females toward full journey level status in the type of trade or job classification involved.

- A. In the event that a portion of the contract work is subcontracted, the contractor shall: Retain the primary responsibility for meeting training requirements;
- B. Training programs selected by the company shall establish the minimum length and type of training for each classification.
  1. Selected training programs shall be submitted to the Wyoming Department of Transportation (WYDOT) and the Federal Highway Administration (FHWA) for approval. Programs will be approved only if they are determined to meet the EEO obligations and provide meaningful training to allow the average trainee to be upgraded towards journey level status. Programs shall meet the following minimum requirements:
    - a. The program is an organized, work plan containing the terms and conditions of employment, training, and supervision;
    - b. The program standards contain the equal opportunity pledge prescribed in the Code of Federal Regulations (CFR) 29, 30.3(b), an affirmative action plan in accordance with 29 CFR 30.4 and a trainee selection method;
    - c. The employment and training is in a skilled trade;
    - d. A term of training of not less than 2,000 hours of work experience, consistent with training requirements as established by industry practice;
    - e. An outline of the work processes in which the trainee receives supervised work experience and training on the job, and the allocation of the approximate time to be spent in each major process;

- f. Each trainee's status shall be identified and documented in the programs records.
  - g. No person shall be employed as a trainee in any classification in which the person has successfully completed a training course leading to journey level status or in which the person has been employed at the journey level.
  - h. Provision for organized, related and supplemental instruction in technical subjects related to the trade. (A minimum of 144 hours for each year of training is recommend.) Such instruction may be given in a classroom through trade or industrial courses, or by correspondence courses, or other forms of self-study course work;
  - i. Periodic review and evaluation of the trainee's progress in job performance and related instruction; and the maintenance of appropriate progress records;
  - j. The granting of advanced standing or credit for previously acquired experience, training, or skills for all applicants equally, with commensurate wages for any progression step granted;
  - k. Assurance of qualified training personnel and adequate supervision within the Company;
  - l. Recognition for successful completion (graduation) of training evidenced by an appropriate certificate;
2. Apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, and programs approved or sponsored by the U.S. Department of Labor, Manpower Administration and Training, will be considered acceptable if administered consistent with the equal employment obligations of Federal-aid highway construction Contracts.
- C. Upon award of the contract and prior to commencing work, the contractor shall submit to the engineer, a copy of the Company's Training Program in accordance to Section B above, including a listing of all trainees currently enrolled in the training program.



- D. The Company will be credited for each trainee employed who is currently enrolled or becomes enrolled in an approved program during the course of the project.
- E. Since training and upgrading of minorities and females toward journey level status is a primary objective of this Supplementary Specification, the Contractor shall:
  - 1. Conduct systematic and direct recruitment through public and private sources to solicit minority and female trainees within their company;
  - 2. Periodically review the training and promotion potential of minority and female employees and encourage eligible employees to apply for such training and promotion;
  - 3. Document the steps taken to be in compliance with this Supplementary Specification prior to a determination of the Company's compliance.
- F. This training commitment is not intended and shall not be used to discriminate against any applicant for training, whether a member of a minority group or not.
- G. Training is intended to be provided in the construction crafts.
- H. Wage rates to trainees.
  - 1. Trainees enrolled in BAT approved programs shall be paid according to the appropriate minimum journey level rate specified within the program, or
  - 2. Trainees enrolled in an approved program, not BAT certified, shall be paid at least 60% of the appropriate minimum journey level rate specified in the Contract for the first half of the training period, 75% for the third quarter and 90% for the last quarter of the training program.
- I. Trainee Requirements.
  - 1. Trainees shall receive a copy of the training program.
  - 2. Trainees shall begin training on the project as soon as feasible after the specified starting time for the skill involved.

3. Trainees are not required to be employed on this Contract, but somewhere within the Company workforce.
4. The number of trainees shall be based on the Company's total Gross Receipts averaged over a three year period. (See the accompanying table under section (J) of this Supplementary Specification.
5. Off-site training is permissible if it is an integral part of an approved training program and does not comprise a significant part of the overall program.
6. Trainees will receive credit for continued education courses administered through the program which provide consistent training within the trainees particular discipline.

J. The following table lists training requirements based off the Company's average total Gross Receipts for the past three years:

Company's Total Gross Receipts averaged over the past Three Years	Required Trainees within the Overall Company Workforce
\$1,000,000.00 THRU \$5,000,000.00	1 Trainees
\$5,000,001.00 THRU \$10,000,000.00	2 Trainee
\$10,000,001.00 THRU \$20,000,000.00	3 Trainees
\$20,000,001.00 >	4 Trainees

K. Measurement and Payment: Training will not be measured for payment but will be considered subsidiary to other contract items.

VI. EMPLOYMENT OBLIGATIONS

A. Employment criteria for minorities and females in construction work are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Program (OFCCP), from Federal procurement Contracting offices, or from the Department. The Company shall make substantial uniform progress addressing the use of minority and women established in each craft during the period specified.

- B. The responsibilities set forth in the solicitation, are expressed as the total of minorities and females that the Company should reasonably be able to achieve in the covered area.
1. Minority and female employment shall be substantially uniform throughout the length of the Contract and in each trade, and the Company shall make a good faith effort to employ minorities and females proportionately on each of its projects.
  2. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Company's Equal Employment Opportunities responsibilities will be a violation of this Contract and Federal Regulations.
- C. The Equal Employment Opportunity (EEO), responsibilities are applicable to all of the Company's construction work (whether or not it is Federal or Federally-assisted) performed in the covered area.
1. If the Company performs construction work, in a geographical area located outside of the covered area, the EEO obligations established for such geographic area where the work is actually performed shall apply. With regard to this second area, the Company is responsible for the EEO requirements for both its Federally and non-Federally involved construction.
  2. Covered Companies performing construction work in a covered areas where they do not have a Federal or Federally - assisted construction Contract shall apply the minority and female employment responsibilities established for the covered area where the work is being performed.
- D. Neither the provision of any collective bargaining agreement, nor the failure by a union with which the Company has a collective bargaining agreement to refer either minorities or females, shall excuse the Company's obligations under this Supplementary Specification.
- E. Companies are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations. The efforts of these associations, of which the Company is a member and participant, may be asserted as fulfilling any one or more of the Company's obligations under this Specification, provided that the Company actively participates in the group, makes every effort to assure that the group has a

positive impact on the employment of minorities and females in the industry, insures that the material benefits of the program are reflected in the Company's minority and female work force participation, makes a good faith effort to meet its individual obligations, timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Company. The obligation to comply, however, is the Company's, and failure of such a group to fulfill an obligation shall not be a defense for the Company's noncompliance.

- F. The Company shall take affirmative action in providing equal employment opportunity for all identified minority groups and all females. The Company may be in violation if a particular group is employed in a substantially disparate manner (for example, even though the Company has satisfactory female representation, the Contractor may be in violation if members of specific minority groups or females are available but under-utilized).
- G. The Company shall not use the affirmative action obligations and timetable or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

## VII. SUBCONTRACTING

- A. Participation by Disadvantaged Business Enterprise (DBE).
  - 1. The Company agrees to use DBE firms , as defined in 49 CFR 23. The DBE shall have equal opportunity to compete for and perform subcontracts which the Contractor enters into pursuant to this Contract. The Contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees.
  - 2. In those cases where the Company did not initially intend to subcontract and later circumstances require subletting a portion of the Contract work, it shall solicit bids from DBE's qualified to perform the work and furnish a list of the DBE's contacted when submitting the proposed subcontract for approval.
- B. The Company agrees to insert in any subcontract hereunder, provisions which conform substantially to the requirements and language of this Supplementary Specification.

- C. The Company shall provide written notification to the Department within ten working days of award of any construction subcontract in excess of \$10,000 at any tier of construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor, Employer Identification Number of the subcontractor, estimated dollar amount of the subcontract, and estimated starting and completion dates of the subcontract, and the covered area in which the subcontract is to be performed.
- D. The Company shall use its best efforts to assure subcontractor compliance with its EEO obligations.
- E. The Company shall not enter into a subcontract with any person or firm debarred from Government Contracts.
- F. The Company shall comply with such sanctions and penalties for violations of the provisions of this Supplementary Specification and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts, as may be imposed or ordered. Any Company who fails to comply with such sanctions and penalties will be in violation of these provisions.

#### VIII. REVIEWS

- A. An annual report, Form PR-1391, shall be submitted each July indicating the overall company workforce of the Contractor. |
- B. Other reports shall be filed with the Department as requested and required in order to assure compliance with EEO Requirements.
- C. The Company shall comply with requests made by the Department for compliance reviews to be made at the time and place appointed by the Department.
- D. Failure on the part of the Company to submit required reports and information will result in withholding part or full payment of the next monthly progress payment until the discrepancies are corrected.

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 200 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**SECTION 202 Removal**

**Subsection 202.3 EQUIPMENT**

Add item number 4 to paragraph 1:

4. For Profile Milling Plant Mix ensure machine is equipped with a 30 foot [10 m] (minimum) mobile reference (ski), unless otherwise approved by the engineer.

**Subsection 202.4.5 Removal of Surfacing, Concrete, Sidewalks, Curbs, Gutter, Median, Double Gutter, Etc.**

Revise paragraph 1, item 2 as follows:

Replace subparagraph 3 with the following:

When Profile Milling Plant Mix is specified, milling depths will vary across the length and/or width of the roadway.

Add the following subparagraphs:

Work may include transition milling into structures, project tie-ins, transitions at box culverts and at the beginning and end of project transitions.

Conduct milling operations parallel to the travel lanes, unless otherwise approved by the engineer.

### **Subsection 202.4.7 Removal of Fence, Snow Fence, and Signs**

Add the following paragraph:

<sup>3</sup> If the snow fence anchors will not come out of the ground, cut the anchor off 6 inches [150 mm] below the ground level. Backfill and compact the hole to match the existing ground elevation.

### **Subsection 202.5 MEASUREMENT and PAYMENT**

Revise the following item to paragraph 1:

3. Profile Milling Plant Mix by the short ton [metric ton], square yard [square meter], or cubic yard [cubic meter].

Change the following pay item in paragraph 2:

<b>Pay Item</b>	<b>Pay Unit</b>	<b>Measure to the Nearest</b>	<b>Pay to the Nearest</b>
Profile Milling Plant Mix	SY, CY, TON [m <sup>2</sup> , m <sup>3</sup> , t]	0.1 ft, 0.005 ton [0.05 m, 0.05t]	SY, CY, TON [m <sup>2</sup> , m <sup>3</sup> , t]

## **Section 206 Excavation and Backfill for Culverts**

### **Subsection 206.4.1.1 Culvert Excavation**

Modify the second sentence of paragraph 1 to read as follows:

Vertical limits of culvert excavation are from the base of the bottom slab of box culverts or the grade required to set the invert of pipe culverts at the specified flowline to the top of the existing ground (which is the natural terrain surface in fill areas and the final subgrade line in cut areas).

### **Subsection 206.4.1.2 Trench Excavation**

Modify the second sentence of paragraph 1 to read as follows:

Vertical limits of trench excavation are from the base of the bottom slab of box culverts or the grade required to set the invert of pipe culverts at the specified flowline to the top of the existing ground (which is the natural terrain surface in fill areas and the final subgrade line in cut areas).

### **Subsection 206.4.1.3 Culvert/Trench Subexcavation**

Replace paragraph 2 with the following:

<sup>2</sup>Excavation below the grade required to set a culvert at the specified flowline will be classified as culvert subexcavation.

## **SECTION 209 Watering**

### **Subsection 209.5 MEASUREMENT and PAYMENT**

Replace paragraph 3 with the following:

<sup>3</sup> When specified, the department will pay for all water obtained from the source(s) indicated in the contract.

## **SECTION 210 Equipment Work**

### **Subsection 210.5.2 Referenced Sections for Direct Payment**

Replace sub-paragraphs 1 and 2 with the following:

1. Additional power equipment required to load scrapers to capacity by equipment hours in accordance with Section 210, Equipment Work, for the equipment used or in accordance with Subsection 109.04, Extra and Force Account Work.
2. Equipment used to load trucks by equipment hours in accordance with Section 210, Equipment Work, for the equipment used or in accordance with Subsection 109.04, Extra and Force Account Work.

## **SECTION 213 Overburden**

### **Subsection 213.5.1 General**

Modify paragraph 3 to show payment to the nearest CY [m<sup>3</sup>].



## **SECTION 215 Storm Water Pollution Prevention**

### **Subsection 215.5.1 General**

Add the following to paragraph 1, subsection 2.

Disturbances less than one acre [1047 m<sup>2</sup>] that do not require a permit will not require a SWPPP and that item will be eliminated in accordance with Subsection 109.3.2, Eliminated or Unused Pay Items.

### **Subsection 215.2 Materials**

Change the metric conversion in paragraph 4 to 4.0 lb/ft [5.95 kg/m]

## **SECTION 216 Seeding, Fertilizer, and Sodding**

### **Subsection 216.4.1 General**

Add the following to the end of paragraph 1:

If the weather conditions are favorable the engineer can extend the spring seeding date to June 30, and start the fall window on August 15. If at least half the project is above 7000 feet in elevation there will be no restrictions on seeding in the summer.

Replace paragraph 8 with the following:

<sup>8</sup> Remove newly exposed rocks with diameters greater than 3 in [75 mm] within the specified clear zone.

### **Subsection 216.5.1 General**

Add Fertilizer Type III to item 3 in paragraph 1.

## **SECTION 221 Dust Control Agent**

### **Subsection 221.4 CONSTRUCTION**

Replace paragraph 1 with the following:

<sup>1</sup> Prior to applying dust control agent, furnish the engineer with a copy of the manufacturer's recommendations for application. Apply dust control agent per manufacturer's recommendations.

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 300 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict with, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 301, Aggregate Subbase, Base, Courses, and Bed Course Material**

**Subsection 301.4.1.3, Placing**

Modify paragraph 1 with the following:

Replace During production... with During placement...

Replace paragraph 3 with the following:

Compact each layer to at least 95.0 percent of AASHTO T180 maximum density.

**Subsection 301.5 MEASUREMENT and PAYMENT**

Modify paragraph 1 by replacing section 1 with the following:

1. Cubic yards [cubic meters]. Volume of material will be computed by using the neat line for width, including one half the taper width where applicable, multiplied by the neat line for thickness, multiplied by the neat line for length of the completed surface.

Modify paragraph 2 by replacing section 2 with the following:

2. Square yards [square meters]. Surface area will be computed as the neat line for width, including one half the taper width where applicable, multiplied by the neat line for length of the completed surface.

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 400 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 401 Plant Mix Pavements and Recycled Plant Mix Pavements**

**Subsection 401.2.1 Performance Graded Asphalt Binder**

Replace the last sentence of paragraph 1 with the following:

The department maintains a current list of qualified suppliers which is available on the WYDOT website.

**Subsection 401.3.3.3 Drum Plants**

Insert the following sentences in paragraph 2 after the third sentence:

...discharge of the mixture. Ensure the plant produces a printout for every 300 tons of mix produced, or a minimum of 2 times per day, one in the morning and one in the afternoon, whichever is greater. Provide the engineer with this documentation daily. To ensure...

**Subsection 401.4.7.4 Lot Sizes**

In paragraph 2 number 2.2., In-Place Density, correct Table reference to read:

Table 401.4.12-2, In-Place Density Test Requirements

**Subsection 401.4.8 Verification**

Add the following paragraph to the end of paragraph 3, subparagraph 2:

If the contractor's and engineer's results do represent the same sample population, the contractor's test results may be used for quality acceptance.

**Subsection 401.4.12.2 Plant Mix**

Add the following paragraph below Table 401.4.12-2, In Place Density Test Requirements

<sup>(2)</sup> Compact all temporary surfaces in accordance with In-Place Density Designation II, unless otherwise noted in the contract.

**Subsection 401.4.12-1 Testing Requirements Table**

Modify table 401.4.12-1 to read as follows:

**Table 401.4.12-1  
Testing Requirements**

TEST PROCEDURE	LEVEL OF CONTROL <sup>(7)</sup>			
	2	3	4	5
Quality Control - Virgin Aggregate Production				
Gradation; Liquid Limit (LL); Plasticity Index (PI); Coarse Aggregate Angularity (Fractured Faces); Fine Aggregate Angularity; Flat & Elongated <sup>(1)</sup>	1/1000 ton [1/1000 t] min.	1/1000 ton [1/1000 t] min.	1/1000 ton [1/1000 t] min. (3 test min.)	1/1000 ton [1/1000 t] min. (3 test min.) If using existing stockpiles, 2/stockpile
LA Abrasion (Contractor-Furnished Sources Only) <sup>(6)</sup>	1/10,000 ton [1/10 000 t] min.	1/10,000 ton [1/10 000 t] min.	Once each construction season	Once each construction season
Soundness (MgSO <sub>4</sub> ) (Contractor-Furnished Sources Only) <sup>(5 &amp; 6)</sup>	1/20,000 ton [1/20 000 t] min.	1/20,000 ton [1/20 000 t] min.	Once each construction season	No test required
Sand Equivalent (Contractor-Furnished Source Only) <sup>(6)</sup>	1/5000 ton [1/5000 t] min.	1/5000 ton [1/5000 t] min.	Once each construction season	No test required

Quality Acceptance-Mix Production <sup>(2)</sup>				
Mix Volumetrics	2 locations on first day & 1 location each 5000 ton [5000 t] thereafter	2 locations on first day & 1 location each day thereafter until no further corrective actions are required	No tests required	No tests required
Virgin Aggregate Gradation	1 lot/5000 ton [1/5000 t]	1 lot/5000 ton [1/5000 t]	1 lot/5000 ton [1/5000 t]	No tests required
TEST PROCEDURE	LEVEL OF CONTROL			
	2	3	4	5
Asphalt Binder Content	1/day	1/day	1/day	No tests required
Virgin Aggregate-LL; PI; Coarse Aggregate Angularity (Fractured Faces); Fine Aggregate Angularity; Flat & Elongated <sup>(3)</sup>	1/1000 ton [1/1000 t] min.	1/1000 ton [1/1000 t] min.	No tests required	No tests required
Moisture Content of Virgin Aggregate/Hydrated Lime; Moisture Content of Mix	1/day min.	1/day min.	No tests required	No tests required

Verification-Mix Production				
Mix Volumetrics	Split sample required but no test frequency specifically required	Split sample required but no test frequency specifically required	No tests required	No tests required
Virgin Aggregate Gradation	1/lot	1/lot	No tests required	No tests required
Asphalt Binder Content	No tests required	No tests required	No tests required	No tests required
Virgin Aggregate-LL; PI; Coarse Aggregate Angularity (Fractured Faces); Fine Aggregate Angularity; Moisture Content of Virgin Aggregate/Hydrated Lime; Moisture Content of Mix; Flat & Elongated	1/mix design <sup>(4)</sup>	1/mix design <sup>(4)</sup>	No tests required	No tests required

Modify footnotes for Table 401.4.12-1 to read as follows:

- (1) If the first three tests for coarse aggregate angularity, fine aggregate angularity, and flat & elongated are...
- (3) If, during aggregate production, the test results for LL, PI, coarse aggregate angularity, fine aggregate angularity, and flat & elongated...

Add the following footnotes:

- (5) Soundness (MgSO<sub>4</sub>) will be tested on the coarse and fine aggregate separately. The specification for soundness applies to the coarse aggregate only.
- (6) Test frequency refers to the total combined aggregate weight produced. The total combined aggregate weight includes the total weight of coarse aggregate, fine aggregate, and the filler if applicable, combined at the anticipated rates. Testing that applies only to

material passing the No. 4 [4.75 mm] sieve (sand equivalent), will be performed on the combination of fines and filler combined at the anticipated rates and tested at the frequency determined by the total combined aggregate weight.

- (7) Testing frequencies shown are minimum quantities. Example:  
1 min/1000 ton [1 min/1000 t].

#### **Subsection 401.4.13.2 Job Mix Formula**

In paragraph 7, revise sentence 3 to read as follows:

Exception: If the JMF is adjusted during the second lot the adjustment will apply to the first lot.

#### **Subsection 401.4.21 Surface Tolerances**

Remove the last sentence of paragraph 1 and replace with the following paragraphs:

Repair defective work prior to placing chip seal or plant mix wearing course by milling, diamond grinding, or full-depth removal and replacement of the plant mix pavement.

Core areas that require corrective action prior to repairing the surface deviation. If the newly placed pavement thickness is inadequate to allow grinding and maintain the design thickness within ½ inch [12.5 mm] of the thickness designated in the contract or if the surface deviation is a dip, remove the defective area of pavement and replace at no additional cost to the department. To repair dips after removal of the appropriate depth of surfacing, place a tack coat and a minimum of 1 ½ inches [37.5 mm] of hot plant mix.

Provide power-operated milling equipment with a 30 foot [10 m] mobile reference (ski). Ensure the milling machine has a drum with a triple-scroll micro-mill pattern and is operated at a slow forward speed to ensure that the scroll pattern is not over-run. Ensure milling and grinding equipment have a positive means of controlling cross slope elevations.

Run the milling or grinding as a continuous operation to produce the best overall pattern. Ensure grinding equipment is capable of establishing a profile grade by referencing from either the existing pavement or from the independent grade control. Ensure the vertical difference between adjacent

peaks and valleys of the milled or ground surface does not exceed 1/8 inch [3 mm]. Conduct milling and diamond grinding parallel to the travel lanes. Do not mill or grind where it will adversely affect roadway drainage. Continue the repair areas through the shoulders with the same method as the adjacent travel lane repair. Do not leave ridges. Feather grind edges if required.

Complete corrective work prior to placing the fog seal, chip seal, or plant mix wearing course and before suspension of work for winter shut-down. Corrective action on defects that develop during the winter will not be required. If corrective work is not completed prior to winter shut-down, all defects will be corrected when work resumes.

Apply a fog seal and a blotter to surfaces that have been milled or ground, with the exception of surfaces that will receive a fog seal, chip seal, or plant mix wearing course before winter shut-down. Place the fog seal and blotter in accordance with Section 409, Chip and Fog Seals.

Perform the corrective work on travel lanes and adjacent shoulders and provide the necessary traffic control at no additional cost to the department.

#### **Subsection 401.5 MEASUREMENT and PAYMENT**

Add the following to paragraph 1, subsection 1,

No payment will be made for the asphalt binder in excess of the approved contractor mix design value plus 0.25%. When the department allows a change from an available material source in accordance with subsection 106.3.2.2, Available Material Sources, no payment will be made for the asphalt binder in excess of the mix design shown in the contract plus 0.25%, or the approved contractor mix design plus 0.25%, whichever is less.



### **Subsection 401.5.3.3 Plant Mix**

Revise Table 401.5.3-3 Asphalt Content Pay Factors to read as follows:

**Table 401.5.3-3  
Asphalt Binder Content Pay Factors**

Variance of Asphalt Binder Content from Design Content (%)	Pay Factor
0.00 - 0.10	1.05
0.11 - 0.25	1.00
0.26 - 0.30	0.95
0.31 - 0.35	0.90
0.36 - 0.40	0.85
0.41 - 0.45	0.80
0.46 - 0.50	0.75
≥ 0.51	Reject

## **Section 403 Plant Mix Pavement Crack Sealing**

### **Subsection 403.4.3 Routing**

In Table 403.4.3-1, Routing Dimensions, replace "M 173" with "M 324 Type I", and replace "M 301" with "M 324 Type IV".

### **Subsection 403.4.4 Cleaning/Drying**

Replace the second sentence of paragraph 1 with the following:

... Prepare cracks by using compressed air heat lances, but do not overheat the pavement. Before...

**Subsection 403.4.5.1 Quantity Equal to or Less Than 45,000 lb [20 000 kg] or Incidental**

In the second sentence of paragraph 1, replace "M 173" with "M 324 Type I", and replace "M 301" with "M 324 Type IV".

**Subsection 403.4.6.2 Backer Rod**

In paragraph 1, Part 1, replace "M 301" with "M 324 Type IV".  
In the second sentence of paragraph 2, replace "M 301" with "M 324 Type IV".

**Subsection 403.5.2.1 General**

In Table 403.5.2-1, Hot-Poured Elastic Sealant Compliance Limits, replace "M 173" with "M 324 Type I", and replace "M 301" with "M 324 Type IV".

**Subsection 403.5.2.2 Quality Level Analysis (Except Bond Test)**

In subparagraph 2, the square root sign in the equation for sample standard deviation should be extended to include the "n-1" in the denominator.

**Section 404 Plant Mix Wearing Course**

**Subsection 404.2 MATERIALS**

Add the following paragraph:

<sup>3</sup>Use Emulsions SS-1, CSS-1, SS-1h, or CSS-1h.

**Subsection 404.4.2-1 Testing Requirements**

Modify Table 404.4.12-1 to read as follows:

**Table 404.4.2-1  
Testing Requirements**

Test Procedure	Test Frequency <sup>(6)</sup>
Quality Control - Virgin Aggregate Production	
Gradation; Liquid Limit (LL); Plasticity Index (PI); Coarse Aggregate Angularity (Fractured Faces); Fine Aggregate Angularity; Flat & Elongated <sup>(1)</sup>	1/1000 ton [1/1000 t] minimum
LA Abrasion (Contractor-Furnished Sources only)	1/10,000 ton [1/10 000 t] minimum
Soundness (MgSO <sub>4</sub> ) <sup>(2)&amp;(5)</sup> (Contractor-Furnished Source only)	1/20,000 ton [1/20 000 t] minimum
Sand Equivalent <sup>(2)</sup> (Contractor-Furnished Source only)	1/5000 ton [1/5000 t] minimum
Quality Acceptance-Mix Production <sup>(4)</sup>	
Virgin Aggregate Gradation	1 lot/5000 ton [1 lot/5000 t]
Asphalt Binder Content	1/day
Virgin Aggregate-LL; PI; Coarse Aggregate Angularity (Fractured Faces); Fine Aggregate Angularity, Flat & Elongated <sup>(3)</sup>	1/1000 ton [1/1000 t] minimum
Moisture Content of Virgin Aggregate/Hydrated Lime	1/1000 ton [1/1000 t] minimum
Moisture Content of Mix	1/day
Verification-Mix Production	
Virgin Aggregate Gradation	1/lot
Asphalt Binder Content	No tests required
Virgin Aggregate-LL; PI; Coarse Aggregate Angularity (Fractured Faces); Moisture Content of Virgin Aggregate/Hydrated Lime; Moisture Content of Mix; Flat & Elongated	No tests required

Modify the footnote for Table 404.4.2-1 to read as follows:

- (1) If the first three tests for LL, PI, coarse aggregate angularity, fine aggregate angularity, and flat & elongated are within specification and there are no changes in the crushing process, test at a frequency of 1/10,000 ton [1/10 000 t].

Add the following footnote:

- (5) Soundness (MgS04) will be tested on coarse and fine aggregate separately. The specification for soundness will apply to the coarse aggregate only.
- (6) Testing frequencies shown are minimum quantities. Example: 1 min/1000 ton [1 min/1000 t].

#### **Subsection 404.5.1 General**

Remove the last sentence of paragraph 1, section 2

### **Section 407 Tack Coat**

#### **Subsection 407.4.2 Sampling Procedures**

In paragraph 1, sentence 2, add the following after wide mouth plastic containers and before the comma:

(Northern Container/Darco Enterprises, 708-496-1696, quart container PJ045, lid CL078 or equivalent)

#### **Subsection 407.5.1 General**

Remove the 2<sup>nd</sup> sentence of paragraph 1

### **Section 408 Prime Coat**

#### **Subsection 408.4.1 General**

Change the reference in paragraph 2, sentence 1 to:

*Materials Testing Manual*, Section 501.0, Liquid Asphalt Sampling.

## **Section 409 Chip and Fog Seals**

### **Subsection 409.2 MATERIALS**

Modify paragraph 2 to read as follows:

For fog seals and overshoots, use ...

### **Subsection 409.4.1 Weather and Seasonal Limitations**

Modify paragraph 1 to read as follows:

Place chip and fog seal coats from June 15 to August 31, unless ...

### **Subsection 409.4.2 Sampling Procedures**

Add the following sentence to paragraph 1:

For liquid asphalt other than emulsified, provide samples and certification documents in accordance with the *Materials Testing Manual*, Section 501.0, Liquid Asphalt Sampling.

#### **Subsection 409.4.4.1 General**

Add the following paragraph:

<sup>6</sup> Ensure an aggregate embedment depth of 50 to 75%.

#### **Subsection 409.4.4.2 Quality Requirements**

Make the following changes to Table 409.4.4-1

**Table 409.4.4-1, Chip Seal Test Requirements**

<b>Test Procedure</b>	<b>Test Frequency</b>
Compatibility tests	Required
<b>Quality Control - Chip Seal Aggregate Production</b>	
Gradation	1/90,000 sy [75,000 m <sup>2</sup> ]
LA Abrasion (Contractor - Furnished Sources Only)	1/90,000 sy [75,000 m <sup>2</sup> ]

<b>Quality Control During Placement</b>	
Aggregate Gradation and LA Abrasion	Not Required
<b>Quality Acceptance</b>	
Aggregate Gradation	1 Lot/450,000 sy [375,000 m <sup>2</sup> ]

**Subsection 409.4.4.3 Quality Acceptance Testing**

Replace paragraph 2 with the following:

<sup>2</sup> Lot size is defined by the department as the number of square yards [square meters] placed, represented by 5 tests as shown in Table 409.4.4-1, Chip Seal Test Requirements. A subplot is the quantity represented by one test. The engineer will determine the exact lot size which may vary due to project length, production suspension, construction schedules, material source changes, or other acceptable reasons. Except in unusual situations the engineer will use lots consisting of 5 samples. When necessary due to production, project size, material source changes or suspension, lots of from three to seven samples may be used. Partial lots with less than three samples will be included with the previous lot for analysis. Lot size will be controlled by the project size or changes in the material source and may several days of production.

**Subsection 409.4.4.4 Test Section**

Modify paragraph 1 to read as follows:

<sup>1</sup> Before full production, construct a test section 0.5 mi [0.8km] long or less as approved by the engineer for each type of surface upon which the chip seal is to be placed.

**Subsection 409.5.1 General**

Make the following changes and additions:

The engineer will measure:

1. Chip Seal and Chip Seal (Overshoot) by the square yard [square meter], based on the length placed and the lesser of the measured or specified width placed.
2. Emulsified Asphalt, Emulsified Asphalt Modified, Emulsified Asphalt (Overshoot) by the short ton [metric ton] in accordance

with Subsection 109.1.3- MEASUREMENT METHODS, and will include the weight [mass] of water specified for mixture at the refinery as part of the

designated type of emulsified asphalt. Quantities in excess...

<sup>2</sup> The department will pay as follows:

Pay Item	Pay Unit	Measure to the Nearest	Pay to the Nearest
Chip Seal	SY [m <sup>2</sup> ]	0.1 ft [0.05 M]	SY [m <sup>2</sup> ]
Chip Seal Overshoot	SY [m <sup>2</sup> ]	0.1 ft [0.05 M]	SY [m <sup>2</sup> ]
Fog Seal	TON [t]	0.01 ton [0.01 t]	0.01 TON [0.01 t]
Emulsified Asphalt	TON [t]	0.01 ton [0.01 t]	0.01TON [0.01 t]
Emulsified Asphalt Modified	TON [t]	0.01 ton [0.01 t]	0.01 TON [0.01 t]
Emulsified Asphalt Overshoot	TON [t]	0.01 ton [0.01 t]	0.01 TON [0.01 t]

#### **Subsection 409.5.3.2 Chip Seal**

Replace the English and metric pay equations with the following equation:

$$PA_A = (PF_A - 1.00) (LS_A) (CS)$$

Where  $PA_A$  = Pay Adjustment for Aggregate Gradation (\$\$)

$PF_A$  = Aggregate Gradation Pay Factor for evaluated lot

$LS_A$  = Lot Size for evaluated lot (SY [m<sup>2</sup>])

$CS$  = Contract Unit Price of the Chip Seal say item (\$\$/SY [\$/m<sup>2</sup>])

### **Section 410 Microsurfacing**

#### **Subsection 410.4.4 Quality Acceptance**

In paragraph 1, change the lot size to 1000 tons [1000 t].

#### **Subsection 410.4.5 Mix Design**

In paragraph 1, sentence 3 revise as follows:

...emulsion, and additives (to both mix and emulsion), and aggregate test results for sand equivalent, LA abrasion, and when required, results from Table 803.6.2-1. Provide ...

Change paragraph 2, sentence 1 to read:

...engineer an aggregate sample and JMF...

#### **Table 410.4.5-1 Aggregate JMF Tolerance**

Revise table as follows:

From Table 410.4.5-1, Aggregate JMF Tolerance: Remove the ¾ [9.50 mm] line and add the word "Passing" before "No." in each sieve size row.

#### **Table 410.4.5-2 Testing Requirements**

For test procedure ISSA TB 147, replace the existing description for specific gravity with the following:

Specific Gravity after 1,000 Cycles of 125 lb [57 kg], maximum.

### **Section 415 Concrete Pavement Repair**

#### **Subsection 415.2.1 Slab Replacement**

Modify paragraph 1 under Materials and Subsection by replacing Epoxy Resin 810.6 with:

Epoxy Resin Grout, Subsection 819.2

#### **Subsection 415.3.3 Grinding and Texturing**

Modify paragraph 2 to read as follows:

<sup>2</sup>Provide an approved and calibrated 25-foot [7.5 m] computerized California-type profilograph with a truss-type frame or an approved class 1 inertial profiler. Ensure that the computer:

Modify paragraph 2, subsection 3 to read as follows:



3. Allows adjustments of the bump threshold to identify corrective action locations; and

**Subsection 415.4.2.2 Mix Design**

Modify paragraph 1 to read as follows:

Submit the following to the engineer for approval at least 28 calendar days...

**Subsection 415.4.2.3 Replacement Procedures**

Add the following to paragraph 2 at the end of sentence 1:

...AASHTO T 99 for subgrade and AASHTO T180 for base material.

Add the following sentence to the beginning of paragraph 3:

Ensure a minimum of 7 days concrete curing time prior to sealant placement, unless otherwise recommended by the sealant manufacturer.

**Subsection 415.4.2.4 Surface Tolerance**

Modify paragraph 2 to read as follows:

<sup>2</sup>If there are repair locations that include four or more contiguous new slabs, measure the surface smoothness with a 25-foot [7.5 m] computerized California-type profilograph or Class 1 inertial profiler. Grind smooth deviations which exceed must-grind values according to the following Table:

**Table 415.4.2-1  
Must Grind and PI Acceptance Levels**

<u>Speed Limit</u>	<u>Must Grind Bumps</u>	<u>Acceptance PI</u>
S > 55 mph	0.3" [8 mm] in 25' [7.6 m]	5 in/mi [80 mm/km]
45 < S ≤ 55	0.4" [10 mm] in 25' [7.6 m]	10 in/mi [160 mm/km]
35 < S ≤ 45	0.4" [10 mm] in 25' [7.6 m]	15 in/mi [240 mm/km]
S ≤ 35	0.5" [13 mm] in 25' [7.6 m]	20 in/mi [320 mm/km]

### **Subsection 415.4.4.3 Surface Tolerance**

Add the following sentence to paragraph 1, at the end of sentence 1

<sup>1</sup>Ensure the concrete pavement surface meets must grind and profile index acceptance levels in accordance with Table 415.4.2-1, Must Grind and PI Acceptance Levels. For dowel bar retrofit installations, ensure an average profile index of 25 in/mi [400 mm/km] using a 0.0 in [0 mm] blanking band for all segments.

### **Subsection 416.4.1 General**

Add the following sentences to the end of paragraph 3

Conduct quality acceptance sampling of the patching material at a minimum frequency of 1 slump test per 100 dowels placed, and 1 set of three strength tests per 300 dowels placed. Any slump test exceeding 10 in [225 mm] will be cause for rejection of all material placed since the previous slump test. Test each set of three 4 in [100 mm] cylinders for strength at between 24 and 36 hours after molding. If the average of the three test results is less than 4000 psi [28 MPa], the 300 dowels the sample represents will be rejected. This will include 25 joints before and 25 joints after the location of sampling. Test locations will be as directed by the engineer.

Modify paragraph 4 to read as follows:

<sup>4</sup> If a mobile mixer is used, use separate bins for cement, fine aggregate, and extension aggregate. Calibrate the proportioning...

### **Subsection 416.4.2 Test Section**

Add the following sentence to paragraph 1, after sentence 2:

Inspect cores in the presence of the engineer. Ensure proper dowel placement, and no voids around the bar circumference. Backfill core locations using the approved dowel bar retrofit concrete. Make visual observations of the backfill concrete and inspect for cracking. After obtaining the engineer's...

### **Subsection 416.4.3 Installation**

Remove the following sentence from paragraph 8:

Finish the concrete to the same surface texture as the adjacent, existing concrete.

## **Section 418 Rumble Strips**

### **Subsection 418.1 DESCRIPTION**

Modify paragraph 1 to read as follows:

<sup>1</sup>This section describes the requirements for cutting rumble strips in plant mix pavement and concrete pavement.

### **Subsection 418.3 EQUIPMENT**

Modify paragraph 1 to read as follows:

1. For portland cement concrete pavement, provide a grinder with diamond tipped grinding drum and water cooling. For plant mix pavement, provide a mill with steel milling head or diamond grinder. Ensure equipment produces a smooth cut in accordance with the corrugation pattern specified.

### **Subsection 418.4.2 Shoulder Rumble Strips**

Modify paragraph 2 by replacing the first sentence with:

Demonstrate to the engineer on an initial test section of 500 ft [150 m] that the equipment and methods provide the desired rumble strip and surface inside each depression, without tearing or snagging the plant mix pavement.

### **Subsection 418.5 MEASUREMENT and PAYMENT**

Modify paragraph 1, item 1 to read as follows:

1. Rumble Strips (Asphalt) or Rumble Strips (Concrete) by the mile [kilometer], longitudinally along the edge of travel way for each affected shoulder.

Modify paragraph 2 by removing pay item Rumble Strips (Milled) and adding the following:

Rumble Strips (Asphalt)	MI [km]	0.001 mi [0.005 km]	0.01 MI [0.05 km]
Rumble Strips (Concrete)	MI [km]	0.001 mi [0.005 km]	0.01 MI [0.05 km]

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 500 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 501, Structural Steel**

**Subsection 501.4.1.10, Holes for Fasteners**

Modify the last sentence of paragraph 9 to read as follows:

“... with the latest edition of the AASHTO *LRFD Bridge Construction Specifications*, including applicable interim revisions.”

**Subsection 501.4.1.24.3, Shop Painting**

Modify the last sentence of section 2. System B, to read as follows:

“...as defined in the latest edition of the AASHTO *LRFD Bridge Design Specifications*, including applicable interim revisions.”

**Section 502, Precast Concrete**

**Subsection 502.4.3.1, General**

Modify the last sentence to read to read as follows:

“... and in accordance with the latest edition of the AASHTO *LRFD Bridge Design Specifications*, including applicable interim revisions.”

**Subsection 502.4.3.2, Prestressed, Precast Concrete Girders**

Modify the last sentence of paragraph 2 to read as follows:

“Estimate these losses in accordance with the latest edition of the *AASHTO LRFD Bridge Design Specifications*, including applicable interim revisions.”

### **Subsection 502.4.3.3, Precast Concrete Box Culverts**

Modify the first sentence of paragraph 1 to read as follows:

Design precast box culvert structures in accordance with the latest edition of the *AASHTO LRFD Bridge Design Specifications*, including applicable interim revisions, for the design live load and fill height specified; ...

## **Section 504, Bearing Piles and Sheet Piling**

### **Subsection 504.4, CONSTRUCTION**

#### **Subsection 504.4.6, Pile Splices**

Correct a typographical error in paragraph 2, Item 1 by replacing “welthe” with “weld the”

Add the following as a new section to 504.4

#### **504.4.8 Pile Points**

Use and attach pile points as specified. Work necessary for pile points is considered incidental to the steel piling.

## **Section 506, Drilled Shaft Foundations**

### **Subsection 506.4.4 Concrete**

Modify paragraph 1 to read as follows:

Use class B concrete in accordance...

## **Section 507, Reinforced Bridge Approach Fills and Reinforced Concrete Approach Slabs**

### **Subsection 507.2 MATERIALS**

Modify paragraph 1 to include



**Table 513.4.13-1  
 Impervious Curing Compound Applications:**

<u>Application</u>	<u>Material</u>
Concrete Pavement	Premium White
Approach Slabs	Premium White
Bridge Decks	Premium White
Silica Fume Concrete	Premium White
Curb & Gutter, Double Gutter	Premium White or Premium Clear
Sidewalks and Bike Paths	Premium White or Premium Clear
Median Paving	Premium White or Premium Clear
Concrete Pavement Repair	Premium White or Premium Clear
Concrete Barrier	Premium White or Premium Clear
Cast-in-Place Drainage Elements	Premium White or Premium Clear
Decorative Concrete	Premium Clear
Slope Paving	Basic
Ditch Paving	Basic
Erosion Control	Basic
Culvert Boxes	Basic
Exposed Horizontal Surfaces of Formed Structures	Basic
Surfaces Exposed After Form Removal	Basic

**Section 515, Silica Fume Modified Concrete Bridge Deck Repair**

Table 515.4.2-1 Silica Fume Modified Concrete Mixture Parameters

Replace Course Aggregate (approx.)<sup>(2)</sup> with Coarse Aggregate (approx.)<sup>(2)</sup>

**Section 516, Paint Repair**

**Subsection 516.4, Construction**

Modify paragraph 5 to read as follows:

The department . . .

**Subsection 516.5, MEASUREMENT and PAYMENT**

Modify paragraph 1, subparagraph 2 to read as follows:

Paint Repair-Structural Steel and Paint Repair-Steel Piling as one complete unit or by the square foot [square meter] of surface area painted.

1-06-04



WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
WELDER QUALIFICATION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes Subsection 501.4.1.11, Welding and Examination of Welded Joints, of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

I. General

- A. Ensure welders are qualified for each process (shielded metal arc welding, flux cored arc welding, gas metal arc welding, or submerged arc welding), position (flat, horizontal, vertical, or overhead), and thickness of metal (Limited or unlimited) to be used on the project. Ensure field welders are qualified for a minimum of vertical position groove welds.
- B. Ensure all qualification tests conform to the requirements of the latest edition of AASHTO/AWS Bridge Welding Code D1.5 and this Supplementary Specification.
- C. Ensure all field welders performing work for the department possess a current Wyoming Transportation Department Welder Certification Card.
- D. To be eligible to take the tests specified herein, ensure field welders are either employed by a contractor currently under contract with the department or are required to pass the test as a condition of employment by a contractor currently under contract with the department.
- E. Ensure shop welders are qualified in accordance with the latest edition of AASHTO/AWS Bridge Welding Code D1.5.
- F. A field welder is defined as a welder who welds at the project construction site. A shop welder is defined as a welder who welds at a fabrication shop.

II. Test Procedures for Field Welders

- A. A representative of the department will witness the preparation and welding of all test specimens and will grade the visual test.

B. Position of Test Welds

1. For the vertical test, the weld plates will be in an approximately vertical plane, with the welding groove approximately vertical. (See Figure 1 or 4 - AWS Test Position 3G).
2. For the overhead test, the weld plates will be in an approximately horizontal plane, with the weld metal deposited from the underside. (See Figure 1 or 4 - AWS Test Position 4G).

C. Position Qualification

1. The vertical test qualifies the welder for flat, horizontal, and vertical groove welds in the thickness limits for which he tested and for flat, horizontal, and vertical fillet welds.
2. The overhead test may only be taken by welders already qualified in the vertical position, or who are taking the vertical test at the same time as the overhead test. A welder is not allowed to be qualified in the overhead position without also being qualified in the vertical position. The vertical and overhead tests qualifies the welder for flat, horizontal, vertical and overhead welding in the thickness limits for which he tested, as well as fillet welds in all positions.

D. Thickness Qualifications

1. A welder may take the test for Limited Thickness, which utilizes the test plates and specimens shown in Figure 1 through Figure 3. Successful completion of this test allows the individual to weld steel up to and including 3/4 inch (19 mm) thickness.
2. A welder may take the test for Unlimited Thickness, which utilizes the test plates and specimens shown in Figure 4 through Figure 6. Successful completion of this test allows the individual to weld steel of any thickness.

E. Position and Thickness Restrictions

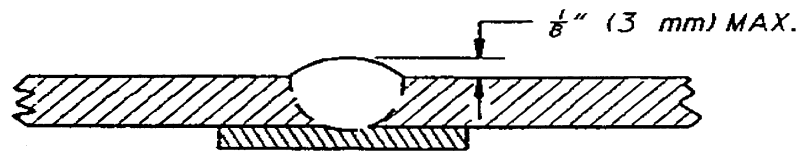
1. One test weld will be required for each position that the welder is testing for.

2. The welder may test for the vertical position, the overhead position, or both in a single session, with the approval of the department representative. The test in the overhead position is not allowed unless taken concurrently with the test in the vertical position or if the welder is already currently qualified in the vertical position.
  3. If both the vertical and overhead position are tested for in one session, use the same thickness, either limited or unlimited.
  4. If both the vertical and overhead position are tested for in one session, and the vertical position is failed, the overhead test will be considered an automatic failure, as well.
  5. The progression for all passes in vertical position welding will be upwards.
- F. Test weld plates will be either ASTM A36/A36M; ASTM A572/A572M, Grade 50 (345); ASTM A588/A588M; or ASTM A709, Grade 36 (250), 50 (345), or 50W (345W).
- G. Electrodes for the Field Welding Test will be AWS E7018 or E71T-8.
- H. Preheat and Interpass Temperature
1. For limited thickness test, ensure the minimum preheat and interpass temperature is 50° F (10° C).
  2. For unlimited thickness test, ensure the minimum preheat and interpass temperature is 70° F (21° C).
- I. Weld and clean test plates in the test position. Limit cleaning between weld passes to chipping and wire-brushing by hand. Do not use power chippers or grinders during the weld test.

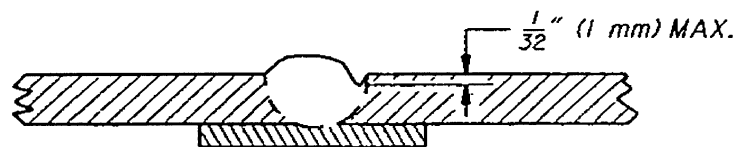
After the welder declares he or she has completed welding the test plates, the department representative will visually examine the test plate for conformance to the following visual test requirements:

1. The weld has no cracks.

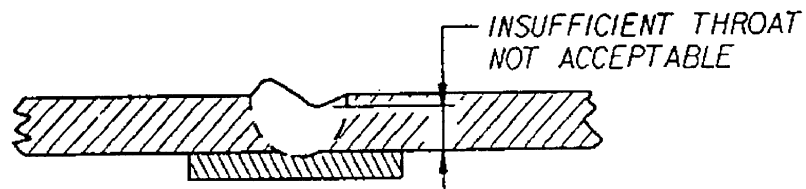
2. Weld reinforcement does not exceed 1/8 in [3 mm].



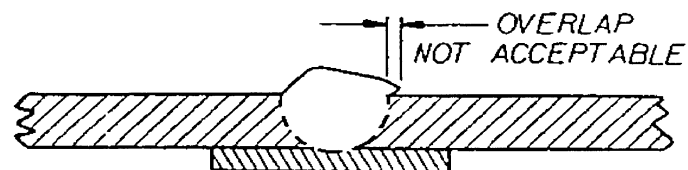
3. Undercut is not greater than 1/32 in [0.8 mm].



4. Throat thickness is full-depth.



5. There is no overlap.



6. There is no porosity.

- J. If the weld sample does not meet the visual test requirements, the welder has failed the test at that point, and no additional welding or grinding will be allowed.
- K. If the weld test meets the visual test requirements, the welder will then cut out the required test specimens for bending. The specimens may be saw-cut or flame-cut for limited thickness, but they must be saw-cut for unlimited thickness. The welder will remove the weld reinforcement and backing plate flush with the surface of the specimens. The welder will pay for all costs of preparing specimens.
- L. Test specimens for limited thickness test.
  - 1. Remove two test specimens from each test weld, and prepare them for testing, as shown in Figure 3. Mark the face side of each specimen with the letter "F."
  - 2. One root-bend test and one face-bend test are required.
- M. Test specimens for unlimited thickness test.
  - 1. Remove two test specimens from each test weld, and prepare them for testing, as shown in Figure 6.
  - 2. Two side bend tests are required.
- N. If the thickness of test specimens for unlimited thickness is over or under the required thickness by 1/32 in [1 mm], the welder has failed the test. Ensure the width of the test specimens for the limited thickness test are within 1/16 in [2 mm] of the dimension shown in Figure 1 & 3.
- O. Any specimen not fully prepared or improperly prepared for testing will be rejected.
- P. If the specimens are satisfactory to the department representative, he or she will complete the top portion of the Welder Qualification Test Record, including grading of the visual portion, and submit the test specimens to the department's Materials Testing Laboratory in Cheyenne. At no time will the test plates or samples be out of visual contact or possession of the department representative until they are transmitted to the department's Materials Testing Laboratory.

- Q. If a welder fails to meet any of the requirements of the visual test or guided bend test, an immediate retest may be made provided it is scheduled within two weeks of notification of failure. An immediate retest consists of two welds of each type and position that the welder failed. The department's representative will ensure all retest specimens meet all the specified requirements. As described above, the welder is responsible for preparing the required specimens, for the guided bend test.
- R. If the welder fails to take or pass the immediate retest, testing will not be allowed for a minimum of 90 days. The welder will provide evidence of further training or practice. Such a test taken after the 90 day period will be considered a completely new test and not subject to the retest requirement of performing two welds.
- S. The welder is required to pay a fee of \$50 for each test weld to perform the guided bend test. The fee covers the cost of testing two specimens required for a single weld. If the welder performed two tests in a single session, the fee is \$100. Performing the guided bend tests for retests is also subject to a \$50 fee (This includes bending all four test specimens required for each retest). Do not pay the fees at the time of testing. The welder will be billed once the guided bend tests have been performed.
- T. If the specimens pass the tests, the department will issue the field welders a certification card, which is valid for three years. Renewal of certification for field welders requires retesting in accordance with the above requirements.

### III. Test Procedures for Shop Welders

The fabricator will conduct qualification tests, in accordance with the latest edition of the AWS Bridge Welding Code D1.5. The fabricator's Certified Welding Inspector will witness the tests. Ensure the fabricator keeps records of the test results and makes them available for examination. The period of effectiveness of the qualification will be in accordance with AWS D1.5.

## Wyoming Department of Transportation Welder Qualification Test Record

Welder's Name: \_\_\_\_\_ ID Mark \_\_\_\_\_  
Employer: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
Date of Test: \_\_\_\_\_ or Date of Retest: \_\_\_\_\_  
Welding Process:  
(SMAW \_\_\_\_\_) (FCAW \_\_\_\_\_) (SAW-AU \_\_\_\_\_) (SAW-SA \_\_\_\_\_) (GMAW \_\_\_\_\_)  
Test Position: (Flat \_\_\_\_\_) (Horizontal \_\_\_\_\_) (Vertical \_\_\_\_\_) (Overhead \_\_\_\_\_)  
Base Metal Designation: A36 \_\_\_\_\_ A572 \_\_\_\_\_ A588 \_\_\_\_\_  
Base Metal Thickness: (3/8" (9.5mm) \_\_\_\_\_) (1" (25mm) \_\_\_\_\_)  
Type of Joint: (Groove \_\_\_\_\_) (Fillet \_\_\_\_\_)  
Root Opening \_\_\_\_\_ Groove Angle \_\_\_\_\_ Weld Length \_\_\_\_\_  
Filler Metal Classification: E7018 \_\_\_\_\_ Other (list) \_\_\_\_\_  
Type of Flux for SAW or Gas for GMAW or FCAW: \_\_\_\_\_  
Cleaning between passes limited to hand cleaning \_\_\_\_\_  
Cleaning limited to the test weld in the position being tested: \_\_\_\_\_

### VISUAL TEST

(To be completed at the completion of welding)

The test weld will meet the following visual requirements:

	<u>PASS</u>	<u>FAIL</u>
The weld will have no cracks	_____	_____
Weld reinforcement will not exceed 1/8" (3 mm)	_____	_____
Undercut will not exceed 1/32" (1 mm)	_____	_____
Throat thickness will be full depth	_____	_____
There will be no overlap	_____	_____
There will be no porosity	_____	_____

I did witness the preparation of the above test specimens in accordance with Supplementary Specification SS\*500A.

Witness Signature: \_\_\_\_\_

Witness' Name (Print): \_\_\_\_\_

Title: \_\_\_\_\_

Location: \_\_\_\_\_

SS-500B  
Page 8 of 10  
Rev. 12-7-04

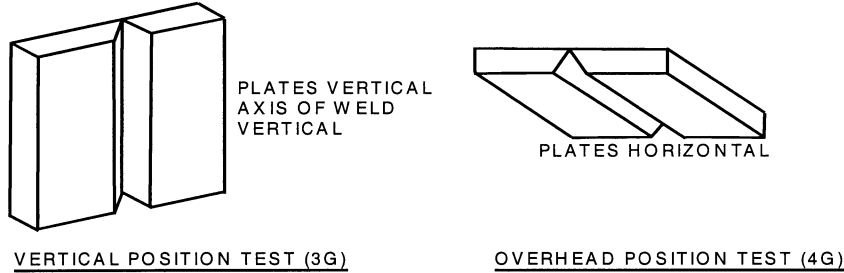
**GUIDED BEND TEST RESULTS**  
(To be completed by Materials Laboratory)

<u>Test Position</u>	<u>Type of Bend</u>	<u>Pass</u>	<u>Fail</u>	<u>Remarks</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

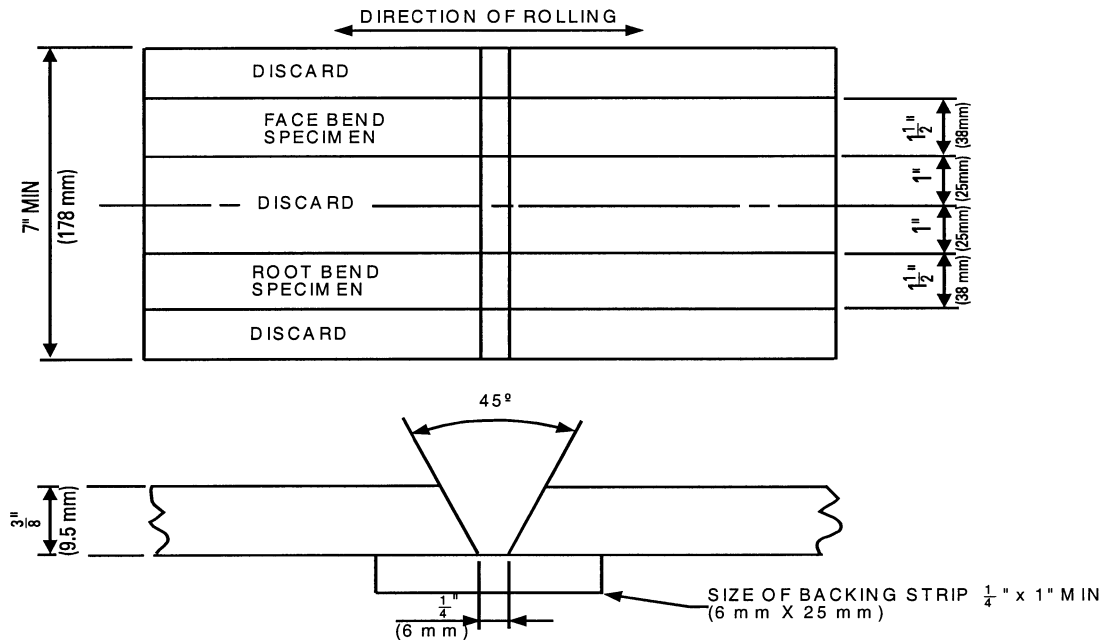
Tested by: \_\_\_\_\_



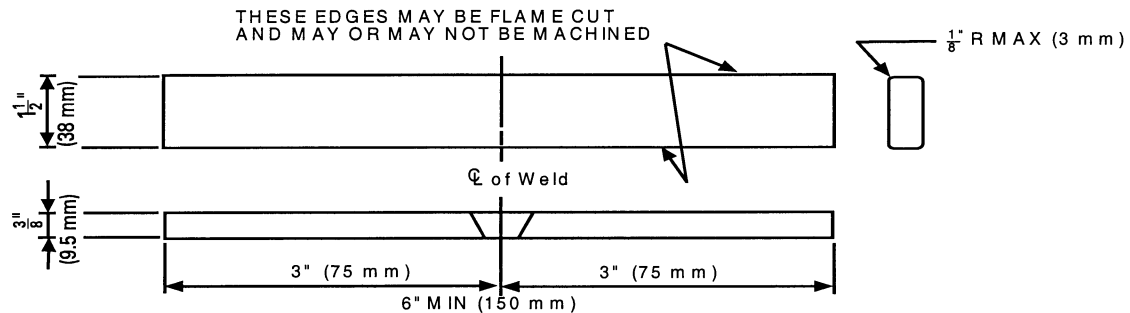
**TESTS FOR LIMITED THICKNESS QUALIFICATION**



**FIG 1 - POSITIONS OF TEST PLATES FOR GROOVE WELDS**



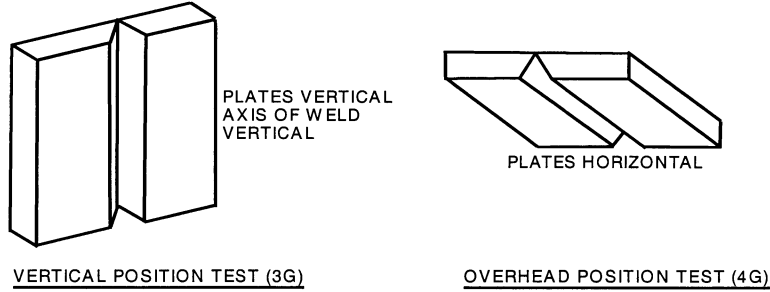
**FIG 2 - BUTT JOINT FOR LIMITED THICKNESS TEST**



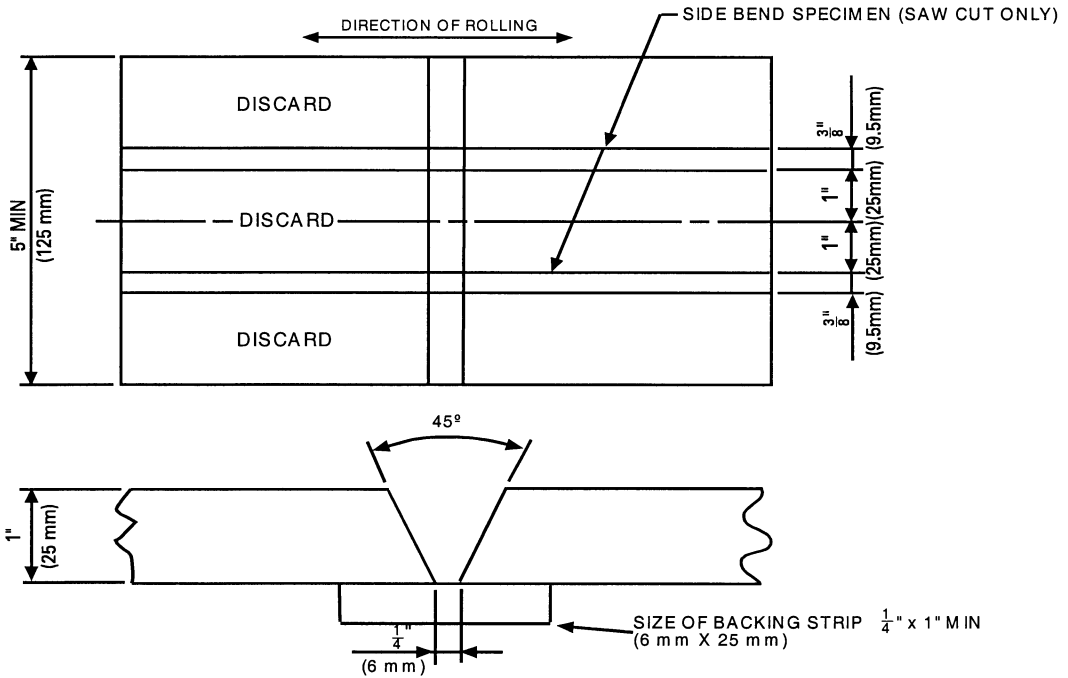
**NOTE:** WELD REINFORCEMENT AND BACKING STRIP SHALL BE REMOVED FLUSH WITH THE SURFACE OF THE SPECIMAN.

**FIG 3 - FACE AND ROOT BEND SPECIMENS**

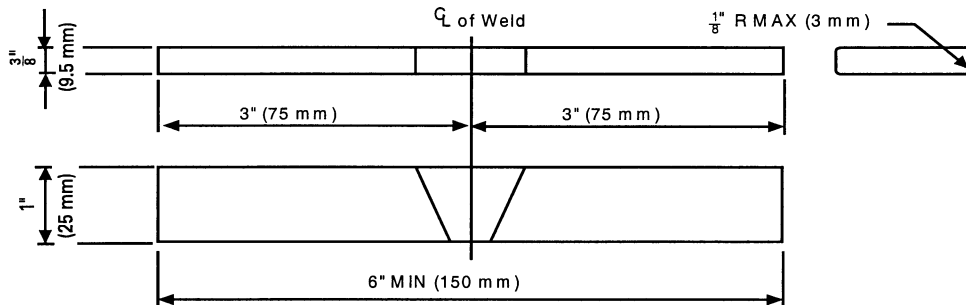
**TESTS FOR UNLIMITED THICKNESS QUALIFICATION**



**FIG 4 - POSITIONS OF TEST PLATES FOR GROOVE WELDS**



**FIG 5 - BUTT JOINT FOR UNLIMITED THICKNESS TEST**



**NOTE: WELD REINFORCEMENT AND BACKING STRIP SHALL BE REMOVED FLUSH WITH THE SURFACE OF THE SPECIMEN.**

**FIG 6 - SIDE-BEND SPECIMENS**

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
BRIDGE BEARING CORRECTION

**DESCRIPTION:** This work consists of placing epoxy-resin material in gaps between elastomeric bearing pads and concrete and gaps between masonry plates and fabric pads, in accordance with the contract.

This work will not be measured for payment but will be considered as the approved corrective measure required, at the contractor's expense, in accordance with Subsection 501.4.2.6, Preparation of Bearing Areas, of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**MATERIALS:** Ensure crack and port sealing material is a two-component, structural epoxy paste adhesive conforming to ASTM C-881, Type I, Grade 3, Class B or C.

Ensure epoxy-resin injection material is a two-component, epoxy resin adhesive conforming to ASTM C-881, Type IV, Grade 1, Class B or C.

Use Class B if temperature is 40° F to 60° F [4° C to 16° C].

Use Class C if temperature is over 60° F [16° C].

**CONSTRUCTION: GAPS BETWEEN ELASTOMERIC BEARING PAD AND CONCRETE:**  
See Figure 1.

Place 2 in x 2 in [50 mm x 50 mm] shim plates as required to raise the elastomeric bearing pad flush with the bottom of the sole plate.

Place injection ports at the small end of the void. Seal all edges of the void between the elastomeric bearing pad and the concrete and around the injection ports with crack and port sealing material, Class B or C, as recommended by the manufacturer. Puncture a 1/8-inch [3 mm] diameter vent hole in the crack and sealing material at the corners on the opposite side of the injection ports.

After the crack and sealing material has cured, inject the void with epoxy-resin injection material, Class B or C, as recommended by the manufacturer. Continue injection until neat epoxy-injection material flows out of the vent holes in the corners. Plug the injection ports and the vent holes.

After the epoxy-injection material has cured, trim off all protruding injection ports and epoxy-resin injection material, leaving a smooth, neatly finished surface.

**GAPS BETWEEN MASONRY PLATE AND FABRIC BEARING PAD:** See Figure 2.

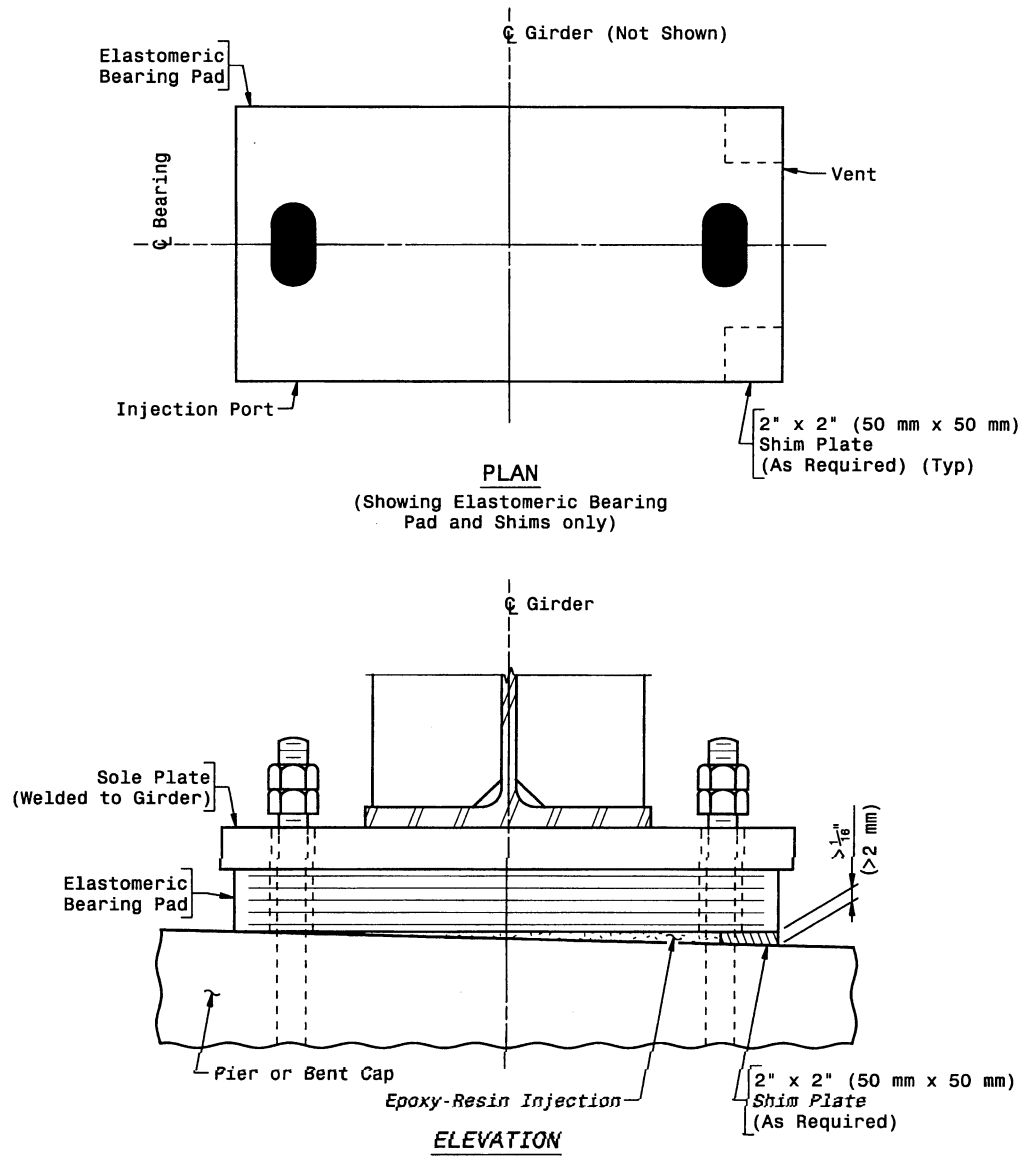
Place 2 in x 2 in [50 mm x 50 mm] shim plates, as required, between the masonry plate and the fabric bearing pad.

Place injection ports at the small end of the void between the masonry plate and the fabric bearing pad. Seal all edges of the void between the masonry plate and the fabric bearing pad and around the injection ports with crack and port sealing material, Class B or C, as recommended by the manufacturer. Puncture a 1/8-inch [3 mm] diameter vent hole in the crack and sealing material at the corners on the opposite side of the injection ports.

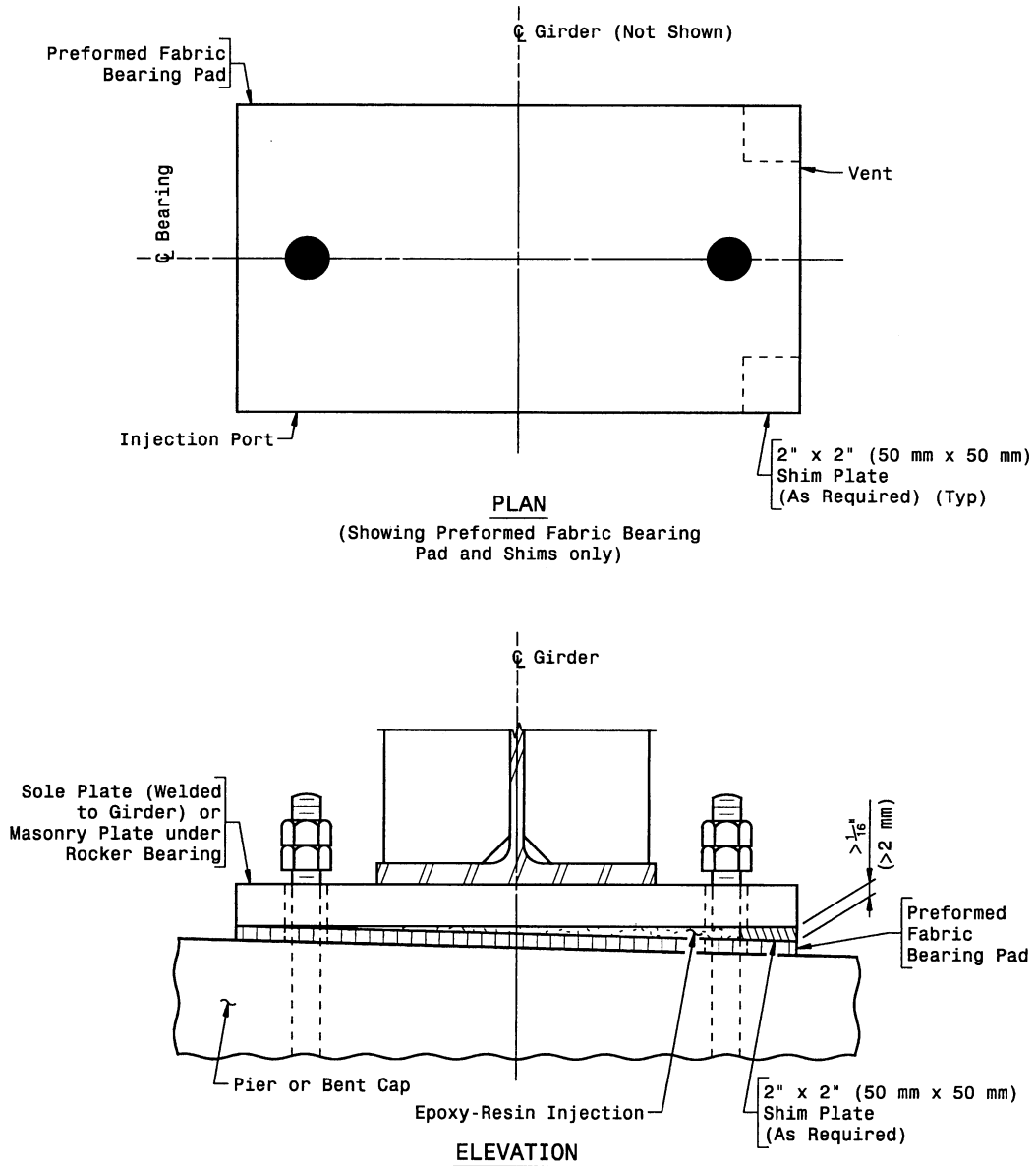
After the crack and sealing material has cured, inject the void with epoxy-resin injection material, Class B or C, as recommended by the manufacturer. Continue injection until neat epoxy-injection material flows out of the vent holes in the corners. Plug the injection ports and the vent holes.

After the epoxy-injection material has cured, trim off all protruding injection ports and epoxy-resin injection material, leaving a smooth, neatly finished surface.

**FIGURE 1 - CORRECTION OF ELASTOMERIC BEARING PAD GAPS**



**FIGURE 2 - CORRECTION OF MASONRY PLATE GAPS**



WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 600 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 603 Culverts and Storm Drains**

**Subsection 603.4.2 Pipe Selection**

Remove the last sentence of paragraph 2.

**Section 609 Curb and Gutter**

**Subsection 609.4.3.2 Expansion Joints**

Modify paragraph 1, bullet 4 to read as follows:

In line with expansion joints in existing adjacent concrete pavement and at both sides of driveways.

**Section 611 Highway Monuments**

**Subsection 611.2 MATERIALS**

Replace paragraph 2 with the following:

<sup>2</sup>Provide highway monument posts of precast, reinforced concrete. Provide tablets meeting US Army Corps of Engineers Type 1 disc with the classic 3 inch long split style tapered stem. Ensure the tablet is orbital-formed from solid, unleaded silicon-bronze bar and has a completely smooth top, polished appearance with no raised markings or visible surface defects.

## **Section 616 Snow Fence**

### **Subsection 616.2 MATERIALS**

Modify this section by adding the following paragraph

<sup>4</sup> Bolts and fasteners shall be galvanized.

### **Subsection 616.4.1, New Snow Fence**

Modify the second sentence of paragraph 1, to read as follows:

As required, provide additional washers and adjust bolts lengths so that a minimum of 1 thread and a maximum of ½ in [13 mm] of thread is exposed...

Modify the third sentence of paragraph 3, to read as follows:

Install bars in holes using epoxy resin grout,...

Modify the third sentence of paragraph 4, to read as follows:

If driving anchors is not possible, install four rock anchors per panel with two rock anchors for each outer sill.



WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 700 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 702, Signs, Delineators, and Reference Markers**

**Subsection 702.2, Materials**

Paragraph 1, change "Type III Retroreflective Sheeting" to Retroreflective Sheeting.

**Subsection 702.5.1, General**

Add the following pay item to the bottom of paragraph 2

Sign Post, Rnd	EA [Ea]	EA [Ea]	EA [Ea]	
Tubular Stl				

**Section 703, Temporary Traffic Control**

**Subsection 703.2.1, General**

Change the end of paragraph 2 to read Subsection 816.4, Retroreflective Sheeting

**Subsection 703.2.2, Drums, Cones, and Tubular Markers**

In paragraphs 1 and 2, replace the term "grabber cones" with 42-inch cones.

Remove paragraphs 3 and 4.

**Subsection 703.2.4, Sign Panels**

Add the following paragraph

<sup>3</sup> Other materials meeting NCHRP-350.

<sup>3</sup> Other materials meeting NCHRP-350.

#### **Subsection 703.2.9, Portable Plastic Water Filled Barrier**

Modify paragraph 1 to read as follows:

<sup>1</sup> Use portable, longitudinal, crashworthy plastic barrier that meets all the following requirements.

Modify the metric dimensions in paragraph 1, subparagraph 2 to [1980 mm x 530 mm x 810 mm]

Add the following subparagraph:

4. Provide a crashworthy end terminal, or barrier that acts as its own crashworthy end treatment, or flare barrier outside the clear zone.

#### **Subsection 703.2.10, Temporary Concrete Barrier and End Terminal**

Modify paragraph 1 to read as follows:

<sup>1</sup> Provide temporary concrete barrier and terminals meeting the requirements of the contract. If the barrier is to remain the property of the contractor and does not have to connect to state furnished barrier, the contractor may elect to furnish another temporary concrete barrier type meeting the requirements of NCHRP 350, test level TL-3 with a maximum dynamic deflection of 4 feet. Furnish FHWA letter of acceptance for the barrier type and connection detail and evidence of maximum dynamic deflection to the engineer. Provide crash worthy terminals where terminated within the clear zone or flare outside clear zone.

#### **Subsection 703.4.1, General**

Add the following sentence to the end of paragraph 2:

Ensure the alternate plan is the same quality and detail as the one shown in the contract.

Paragraph 9, remove the phrase "other than reboundable tubular markers."

Remove paragraph 10.

#### **Subsection 703.4.8.1, General**

Add the following sentence to the end of paragraph 1:

Do not use motorist guidance markers when interstate (divided highway) traffic is placed two-lane, two-way.

Modify paragraph 3 to read as follows:

<sup>3</sup> Use white temporary lane line markings and white or yellow edge line markings on single direction multi-lane highways.

Replace paragraph 6 with the following:

Use paint with beads for temporary pavement markings on all pavement lifts except the final surface treatment, chip seal, seal coat, or concrete pavement.

Final surface treatment is defined as:

1. Existing surfacing on interstate (divided highway) lane designated to remain in place over the winter,
2. After the final surface designated in the contract has been applied.

Modify paragraph 7 to read as follows:

<sup>7</sup> Place temporary pavement markings to provide delineation by the end of each day's operations. Place . . .

Modify paragraph 11 to read as follows:

<sup>11</sup> When pavement markings are required but cannot be applied due to the type of surface, install channelizing devices for:

### **Section 703.5, Measurement and Payment**

Add the following to paragraph 2, item 9:

The engineer will pay as follows:

30% on the estimate following placement  
Up to 90% based on the work complete  
10% when sequential chevrons are no longer required. If the contractor can demonstrate that payment mechanism is not accurate it may be modified by the engineer.

**Section 704, Traffic Control Maintenance**

Subsection 704.4.1 General

Replace paragraph 2 with the following:

Provide a maintainer if traffic is being diverted or protected by temporary traffic control devices. During the scheduled maintenance days, ensure that a maintainer is on the project at all times that traffic is being diverted or protected by temporary traffic control devices.

Replace paragraph 3 with the following:

When traffic is being diverted or protected by temporary traffic control, schedule at least 2.4 shifts of maintenance for every calendar day.

Subsection 704.5 MEASUREMENT and PAYMENT

Replace paragraph 1 with the following:

<sup>1</sup>The engineer will measure Traffic Control Maintenance, regardless of the number of maintainers provided, per shift for a scheduled 2.4 contiguous 10 hour shifts per calendar day. If a lane and/or shoulder closure is removed from the roadway prior to official sunset and the lane and/or shoulder remains open during the hours of darkness, payment for the traffic control maintainer will be 1.2 shifts per day.

Replace paragraph 2 with the following:

The department will pay as follows:

Pay Item	Pay Unit	Measure to Nearest	Pay to Nearest
Traffic Control Maintenance	SHFT [shft]	2.4 SHFT [shft]	2.4 SHFT [shft]

WYOMING DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY SPECIFICATION  
FOR  
AMENDMENTS TO THE DIVISION 800 OF THE  
2003 STANDARD SPECIFICATIONS  
FOR ROAD AND BRIDGE CONSTRUCTION

This supplementary specification supplements, amends, and where in conflict therewith, supersedes various sections of the 2003 edition of the Wyoming Department of Transportation's *Standard Specifications for Road and Bridge Construction*.

**Section 801 Cement and Admixtures**

**Subsection 801.2 Fly Ash**

Remove "(including table 2)" from paragraph 1.

Change table 4 reference to table 3 in paragraph 3.

**Subsection 801.3 Blended Hydraulic Cement**

Remove "(including table 2)" from paragraph 1.

**Section 802 Curing Materials**

**Subsection 802.1 Curing Materials**

Modify Paragraph 1 to read as follows:

<sup>1</sup> Provide materials in accordance with Table 802.1-1, Curing Compounds. The latest Section 701 in the Materials Testing Manual pre-approves all products.

Remove Table 802.1-1, Curing Materials and insert new Table 802.1-1, listed as follows; Modify Table 802.1-1 as follows:

**Table 802.1-1  
Curing Materials**

Materials	Specifications
Burlap Cloth (Jute or Kenaf)	AASHTO M 182 Class 3
Sheet Materials	AASHTO M 171
Impervious Curing Compounds*: "Basic"	AASHTO M 148, Class A
"Premium White"	AASHTO M 148, Type 2, Class B, & Table 802.1-2 or ASTM C 1315, Type II, Class A or B
"Premium Clear"	ASTM C 1315, Type I or I-D, Class A

\*Provide compounds meeting all current VOC requirements, and having flash points of at least 100° F.

Remove paragraph 2 (Replaced by Table 802.1-1)

## **Section 803 Aggregate**

### **Subsection 803.2.2 Coarse Aggregate**

Add the following as paragraph 3.

Meet the following coarse aggregate gradation for Silica Fume Modified Concrete:

<u>Sieve Size</u>	<u>Percent Passing</u>	
	<u>Min.</u>	<u>Max</u>
½ in	100	
¾ in	85	100
No. 4	10	30
No. 8	0	10
No. 16	0	5
No. 200	0	1.5

### **Subsection 803.2.2 Coarse Aggregate**

In the text and table replace the word “course” with “coarse”.

### **Subsection 803.4.4 Gradation and Properties**

Modify table 803.4.4-1, Gradation Requirements: Subbase and Base as follows:

Sieve No. 30 [600  $\mu\text{m}$ ], under Grading W, remove the % passing (10 - 30).

Modify table 803.4.4-2, Aggregate Properties: Subbase and Base:

Modify the last property to read as follows:

Soundness ( $\text{MgSO}_4$ ) Loss for coarse aggregate, max.<sup>(1)</sup>

Add the following footnote to the end of table 803.4.4-2, Aggregate Properties: Subbase and Base

<sup>1</sup> Soundness ( $\text{MgSO}_4$ ) will be tested on coarse and fine aggregate separately. The specification for soundness will apply to the coarse aggregate only.

### **Subsection 803.5 Aggregate for Flexible Pavement**

In Table 803.5.5-2 Aggregate Properties: Flexible Pavements, the last section Soundness ( $\text{MgSO}_4$ ) loss, max., % should read as follows:

Soundness ( $\text{MgSO}_4$ ) loss, max., %<sup>(3)</sup>

Add footnote<sup>(3)</sup> below Table 803.5.5-2 to read as follows:

<sup>3</sup> Soundness ( $\text{MgSO}_4$ ) will be tested on coarse and fine aggregate separately. The specification for soundness will apply to the coarse aggregate only.

### **Subsection 803.6 Aggregate for Plant Mix Wearing Course**

Add the following paragraph to 803.6.1, General:

<sup>2</sup> When specified, provide aggregate in accordance with Subsection 803.6.2, Polish Resistant Aggregate.

### **Subsection 803.6.2 Nonlimestone Source**

Rename the subsection as follows:

Subsection 803.6.2 Polish Resistance Aggregate

Replace paragraph 1 with the following:

<sup>1</sup> Provide aggregate that is in accordance with one of the test methods in Table 803.6.2-1, Polish Resistance Aggregate.

Change the name of Table 803.6.2-1 to Polish Resistant Aggregate Requirements.

Add the following footnote to the ASTM D 3042 test:

<sup>2</sup> Alternatively the Insoluble Residue may be determined in accordance with the *Materials Testing Manual* procedure No. 426.0

### **Subsection 803.7 Aggregate for Microsurfacing**

Replace paragraph 2 with the following:

<sup>2</sup> When specified, provide aggregate in accordance with Subsection 803.6.2, Polish Resistant Aggregate.

### **Subsection 803.8 Aggregate for Chip Seal**

Add the following sentence to the end of paragraph 2:

<sup>2</sup> When specified, provide aggregate in accordance with Subsection 803.6.2, Polish Resistant Aggregate.



Modify Table 803.8-1, Gradation Requirements: Chip Seal

The gradations for Type K & S have been reversed, It should read as follows:

Sieve	K	S
1 in [25.mm]	-	-
3/4 in [19 mm]	-	-
½ in [12.5 mm]	100	100
3/8 in [9.5 mm]	95 to 100	95 to 100
No. 4 [4.75 mm]	0 to 35	85 to 100
No. 8 [2.36]	0 to 20	-
No.200 [75 µm]	0 to 3	0 to 5

#### **Subsection 803.9 Aggregate for Blotter**

Modify Table 803.9-1, Gradation Requirements: Blotter, to reflect sieve size No. 4 [4.75 mm].

#### **Subsection 803.13.1 Aggregate for Maintenance Stockpiles, Type A**

Modify paragraph 1 to read as follows:

<sup>1</sup>Provide and stockpile aggregate consisting of clean, hard, durable particles of crushed gravel or stone having a percentage of wear of no more than 40. For a maximum nominal size of ½ inch [12.5 mm], ensure that 95 percent of the material is retained on a ½ inch [12.5 mm] sieve before crushing. For a maximum nominal size of ¾ inch [19.0 mm], ensure that 95 percent is retained on a ¾ inch [19.0 mm] sieve before crushing. Ensure that the material meets the requirements of Table 803.13.1-1, Gradation Requirements: Maintenance Stockpiles (Type A). For the fraction passing the No 4 [4.75 mm] sieve, ensure a liquid limit no greater than 25 and a plasticity index no greater than 3.

#### **Subsection 803.13.4 Sodium Chloride for Maintenance Stockpiles**

Modify paragraph 1 to read as follows:

Eliminate the reference to "class 1".

## **Section 804 Asphalt Materials**

### **Subsection 804.1.1 Binder Properties**

Modify the second sentence of paragraph 1 to read as follows:

Except for PG 64-28 unmodified, when . . .

Add paragraph 3

Base asphalt may be modified with no greater than 0.50% phosphoric acid. Total phosphorus content of PGAB delivered to WYDOT will not exceed 1900 ppm.

### **Subsection 804.1.2 Source Qualification**

Under subparagraph 2.1., For Authorization, add the following:

2.1.3. Phosphorus content of each different asphalt binder as determined by ASTM D1091, D6443, or D6481.

Under subparagraph 2.2., Change the quantities in sentence 1 to the following:

10-gal [40 L] of PGAB in two 5-gal [20 L] containers,...

### **Subsection 804.3 Emulsified Asphalt**

Remove from the first paragraph, second sentence the words “before emulsification”.

In paragraph 2 modify the first sentence to read as follows:

Ensure that emulsions show no separation such as a white/milky appearance after mixing/stirring/agitation in tank, are smooth and homogeneous throughout and in accordance with the *Materials Testing Manual*.

### **Table 804.3-1 Emulsified Asphalt**

Add the superscript notation (8) in the row for Storage Stability in the column underneath CQS-1HP.

Add the superscript note:

<sup>8</sup> Storage Stability is not applicable to CQS-1HP

**Section 805 Geotextiles, Membrane, and Fabrics**

**Subsection 805.2 Geotextile and Impermeable Plastic Membrane**

Modify Table 805.2-1 to include Subgrade Reinforcement as follows:

**Table 805.2-1  
Geotextile and Membrane Requirements (Minimum Average Roll Values <sup>(1)</sup>)**

Fabric and Membrane Property	Test Method	Drainage & Filtration	Erosion Control	Silt Fence	Separation & Stabilization		Embankment & Retaining Wall Reinforcement	Impermeable Plastic Membrane	Subgrade Reinforcement
					Woven	Non-Woven			
<b>PERFORMANCE CRITERIA DURING SERVICE LIFE</b>									
Equivalent or Apparent Opening Size, US Standard Sieve, in [mm]	ASTM D 4751	40-100 [0.425-0.150]	40-100 [0.425-0.150]	20-50 [0.850-0.300]	30-60 [0.600-0.250]	40-100 [0.425-0.150]	30-60 [0.600-0.250]	-	30-50 [0.600-0.300]
Thickness, mils [mm]	ASTM D 5199	-	-	-	-	-	-	12 [0.305]	-
Permittivity, Sec <sup>-1</sup>	ASTM D 4491	1.0	1.0	.05	.05	1.0	0.02	<10 <sup>-7</sup>	0.4
<b>STRENGTH REQUIREMENTS</b>									
Grab Tensile Strength, lb [N]	ASTM D 4632	100 [445]	180 [800]	100 [445]	200 [890]	160 [710]	300 [1335]	150 [665]	250 [1115]
Elongation at Failure, min., %	ASTM D 4632	50	50	15	15	50	15	15	15
Trap Tear Strength, lb [N]	ASTM D 4533	45 [200]	70 [310]	50 [220]	65 [300]	60 [270]	110 [500]	50 [220]	110 [500]
Puncture strength, lb [N]	ASTM D 4833	60 [270]	90 [400]	50 [220]	90 [400]	85 [380]	110 [500]	60 [270]	140 [620]
Seam Efficiency, %	ASTM D 4632	90	90	90	90	90	90	-	90
<b>ENVIRONMENTAL REQUIREMENTS</b>									
Ultraviolet Resistance, % Strength Retention after 500 hours of exposure	ASTM D 4355	50 <sup>(3)</sup>	70	80	50 <sup>(3)</sup>	50 <sup>(3)</sup>	50 <sup>(3)</sup>	50 <sup>(3)</sup>	50 <sup>(3)</sup>

**Subsection 805.3 Paving Fabric**

In the first sentence replace the reference to table 7 with table 8.

## **Section 807 Joint Materials**

### **Subsection 807.2 Hot-Poured Elastic Sealant**

In the first and second sentences of paragraph 1,

replace "M 173" with "M 324 Type I", and  
replace "M 301" with "M 324 Type IV".

In Table 807.2-1, Hot-Poured Elastic Sealant Specification Limits,

replace "M 173" with "M 324 Type I",  
replace "M 301" with "M 324 Type IV",  
replace "D 6690" with "M 324", and  
replace "T 229" with "T 229 WY Modified".

Under table 807.2-1, replace the AASHTO T 229 test method next to  
Relative Density with ASTM Test No. D71 Wyoming Modified.

## **Section 809 Paint**

### **Subsection 809.5.2.2 Properties**

Table 809.5.2-1, Properties of Epoxy Intermediate Field Coat  
Remove the entire first line. "Viscosity, KU"

### **Subsection 809.9.2 Properties**

Table 809.9.2-1, Properties of Epoxy Mastic Paint

In the first line "Viscosity of component A (base), cP [Pa•drv]", remove the  
words "of component A (base)" so it reads Viscosity only.

Remove the entire second line. "Viscosity of component B (curing agent)  
using Stormer Viscometer, 260 to 350g load, KU.

On the third line down "Density, lb/gal [kg/L]", change the values to read as  
follows: 10.0 [1.200] to 15.0 [1.800].

Insert between the third and fourth line "Volatile organic content, lb/gal [kg/L]"  
with the values of 2.8 [0.340], max.

### **Subsection 809.9.3 Composition**

Table 809.9.3-1, Composition of Epoxy Mastic Paint  
Remove 90.0 from the first line and replace it with 87.5.  
Remove 89.0 from the second line and replace it with 88.0

## **Section 810 Concrete Repair**

### **Subsection 810.6 Epoxy Resin**

Under paragraph 1 subsection 1, Injection Material, replace type IV with type I

## **Section 811 Reinforcing Steel, Wire Rope, and Wire Enclosures**

### **Subsection 811.2.1 General**

Remove the last sentence of paragraph 3.

## **Section 813 Guardrail and Barrier**

### **Subsection 813.4 Corrugated Beam Guardrail (Self Oxidizing)**

Revise paragraph 5 as follows:

<sup>5</sup> Provide and use retroreflector tabs, nuts and bolts made of steel...

## **Section 814 Water**

### **Subsection 814.1.2 Water for Concrete**

Modify the third row of Table 814.1.2-2, Properties of Mortar Specimens as follows:

Compressive strength, lb/in<sup>2</sup> [Mpa], AASHTO T 106<sup>(3)</sup>, 10% reduction

## **Section 815 Structural Metals and Metal Castings**

### **Subsection 815.16 Elastomeric Bearing Pads**

Modify first sentence to read as follows:

“Ensure laminated elastomeric bearings conform with the latest edition of AASHTO M 251. Use Appendix X1.”

**Subsection 815.20 Frames, Grates, and Covers**

Modify paragraph 2, sentence 2 to read as follows:

“The department will allow the 5/8 in [16 mm]...”

**Subsection 815.6 Bolts and Fasteners**

In paragraph 1, replace “course” with “coarse”.

**Section 816 Signs and Traffic Devices**

**Subsection 816.4 Type III Retroreflective Sheeting**

Change title of 816.4 to Retroreflective Sheeting.

Modify paragraph 1 to read as follows:

For the type specified, ensure...