



**CONSTRUCTION DIVISION**  
 2441 Headington Road  
 Placerville CA 95667  
 Phone: (530) 642-4987  
 Fax: (530) 295-2655

**KIMBERLY A. KERR**  
 Interim Director of  
 Transportation  
  
 Internet Web Site:  
<http://edcgov.us/dot>

**MAIN OFFICE**  
 2850 Fairlane Court  
 Placerville CA 95667  
 Phone: (530) 621-5900  
 Fax: (530) 626-0387



**DATE:** April 2, 2012

**TO:** All Prospective Bidders

**SUBJECT:** **Addendum No. 1**  
**Wentworth Springs Road at Gerle Creek – Bridge Replacement Project**  
**Contract No. PW 11-30573, CIP No. 77118**

Submit proposals for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are essential parts of the Contract.

ITEM NO.	LOCATION, PAGE OR DRAWING NO.	DESCRIPTION OF CHANGE
1.01	SP-16	In the second to last sentence of the last paragraph of <b>Section 5-1.10 “Records Examination, Audit and Retention Requirements”</b> change <b>“three (3) years”</b> to <b>“four (4) years”</b> .
1.02	SP-28	Delete the first sentence on SP-28 under <b>Section 5-1.36 “Preservation of Property”</b> .
1.03	TOC-3, SP-29	After <b>“Appendix D Tree Removal Inventory”</b> add the following to page TOC-3 of the Table of Contents: <b>“Appendix E U.S Department of Agriculture Forest Service Road Use Permit.....AE-1”</b> Add the following after the second sentence of the last paragraph on page SP-29 under <b>Section 5-1.42 “Areas for Contractor’s Use”</b> : <b>“The Department has obtained a Road Use Permit from the U.S. Department of Agriculture, Eldorado National Forest (USFS) pertaining to the Department’s use of USFS roads as part of the construction of the project. A copy of this permit is included as Appendix E of the Contract Documents. The Contractor shall know and comply with the conditions of the permit, including performing spot brushing along road as needed for vehicle clearance and site distance improvement, and washing all off-road equipment before moving into the project area to prevent the spread of noxious weeds. Should any provision of the Road Use Permit conflict with</b>

		<p><b><i>the special provisions, the special provisions shall govern. No additional compensation will be due to the Contractor for complying with the conditions of the Road Use Permit.</i></b></p> <p>After page AD-1 insert "<b>Appendix E U.S Department of Agriculture Forest Service Road Use Permit</b>" included as <b>Attachment A</b> of this Addendum.</p>
ITEM NO.	LOCATION, PAGE OR DRAWING NO.	DESCRIPTION OF CHANGE
1.04	Plan Cover Sheet, SP-30, SP-68, SP-70	Use the Plan Cover Sheet as a reference. In the fifth paragraph of SP-30, in the third and fourth paragraphs under <b>10-1.11 "Maintaining Traffic</b> on SP-68, and in the seventh paragraph on SP-70 after " <b>Wentworth Springs Road</b> " add " <b>(14N34)</b> ".
1.05	TOC-2, SP-41	<p>After <b>Section 8-2.02 "Freezing Conditions Requirements"</b> add the following to page TOC-2 of the Table of Contents:</p> <p style="padding-left: 40px;"><b>"Section 8-3 WELDING.....SP-41"</b>  <b>8-3.01 WELDING.....SP-41"</b></p> <p>After <b>Section 8-2.02 "Freezing Conditions Requirements"</b> in the special provisions insert "<b>8-3 WELDING</b>" and "<b>8-3.01 WELDING</b>" included as <b>Attachment B</b> of this Addendum.</p>
1.06	SP-41, SP-75	<p><b>Question:</b> The time frame of 80 working days is very tight. If you allow 10 days for shop drawings and figure it will take 20 working days to form, place, set &amp; cure concrete bridge deck and balance of approach work after the bridge arrives, this only leaves 50 working days for bridge manufacture and delivery. This is very tight, if not impossible. Can you add working days to the contract?</p> <p><b>Answer:</b> Please note that in the second paragraph under <b>Section 10-1.01 "Order of Work"</b> and the first paragraph under DESIGN in <b>Section 10-1.19 "Pre-fabricated Steel Truss Bridge"</b> the working days referenced in these paragraphs are not intended to be a part of the contract working days since they will occur prior to the issuance of the Notice to Proceed.</p> <p>Replace the last sentence of the last paragraph on SP-41 with the following:  "The statement shall give the date on which the bridge will be delivered to the project site. The Notice to Proceed will be issued once the Engineer determines the project site is clear of</p>

		<p>snow and that preconstruction surveys are completed, at which point the contract working days will begin. Consideration will be given to the manufacturer's delivery date of the bridge in determining the date on which the contract working days will begin. It is anticipated that Notice to Proceed will be issued such that some of work on the site will be performed concurrent with the manufacture and delivery of the bridge.</p> <p>In the event the bridge materials do not arrive on the date specified, one (1) working day will be added to the contract for each and every working day delay in the delivery of such materials."</p>
ITEM NO.	LOCATION, PAGE OR DRAWING NO.	DESCRIPTION OF CHANGE
1.07	SP-63	<p>Add the following as the second sentence of the first paragraph under FUGITIVE DUST CONTROL PLAN PREPARATION, APPROVAL AND AMENDMENTS in <b>Section 10-1.06 "Dust Control"</b>:</p> <p><b><i>"In accordance with Item 16-7 of Appendix E U.S Department of Agriculture Forest Service Road Use Permit the Contractor shall also submit the FDP (i.e. Dust Abatement Plan) to the USFS for approval prior to the start of any work."</i></b></p> <p>Add <b><i>"and USFS"</i></b> after <b><i>"AQMD"</i></b> in the last sentence of the first paragraph under FUGITIVE DUST CONTROL PLAN PREPARATION, APPROVAL AND AMENDMENTS in <b>Section 10-1.06 "Dust Control"</b>.</p> <p>Add <b><i>"USFS"</i></b> after <b><i>"United States Environmental Protection Agency"</i></b> in the second to last sentence of the third paragraph under FUGITIVE DUST CONTROL PLAN PREPARATION, APPROVAL AND AMENDMENTS in <b>Section 10-1.06 "Dust Control"</b>.</p>
1.08	SP-68	<p>In accordance with Item 17 of <b>Appendix E U.S Department of Agriculture Forest Service Road Use Permit</b> add <b><i>"and USFS"</i></b> after <b><i>"Engineer"</i></b> in the last sentence of the second paragraph under <b>Section 10-1.11 "Maintaining Traffic."</b>.</p>
1.09	SP-68	<p>Add the following to the beginning of the first sentence of the last paragraph under <b>Section 10-1.13 "Clearing and Grubbing"</b> on SP-68:</p>

		<i>“With the exception of the spot brushing along roads as needed for vehicle clearance and sight distance improvement as indicated in Item 1B of Appendix E U.S Department of Agriculture Forest Service Road Use Permit,”</i>
<b>ITEM NO.</b>	<b>LOCATION, PAGE OR DRAWING NO.</b>	<b>DESCRIPTION OF CHANGE</b>
1.10	SP-70, C-10, and P-3	<p><b>Question:</b> Are there any earthwork calculations available? Will there be any spoils?</p> <p><b>Answer:</b> Add the following as the third to last paragraph under <b>Section 10-1.14 “Earthwork”</b> on SP-70:</p> <p><i>“The quantity shown under Bid item 9 “Earthwork (F)” in Exhibit A Contractor’s Bid and Bid Price Schedule of the Draft Agreement and in the Proposal Pay Items and Bid Price Schedule of these Contract Documents is the total excavation quantity. It is estimated that between 420 CY and 470 CY of backfill from this excavation quantity will be required.”</i></p>
1.11	SP-71	<p>Replace the seventh and eighth paragraphs under <b>Section 10-1.16 “Develop Water Supply”</b> with the following:</p> <p><i>“Attention is directed to Item 16-7 of Appendix E U.S Department of Agriculture Forest Service Road Use Permit.”</i></p>
1.12	SP-75	<p>Replace the sentence under subheading <b>Deck Width in Section 10-1.19 “Pre-fabricated Steel Truss Bridge”</b> with the following:</p> <p><i>“The bridge deck width shall be 16'-0”, as measured between the truss elements (not including the angle safety rail).”</i></p>

**The pages of this addendum shall be attached to the Contract Documents booklet.**

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the proposal.

Holders who have already mailed their proposal can contact Janel Gifford at (email: Janel.Gifford@edcgov.us) to arrange return of their proposal.

Inform all suppliers and subcontractors as necessary.

The DOT is only sending this addendum by posting on the following website:  
<http://www.edcgov.us/Government/DOT/Bids.aspx>.

If you are not a Contract Documents Holder, but request a set of documents to bid on this project, you must comply with the requirements of this addendum when submitting your bid.

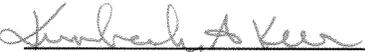
Attachments:

Attachment A –Appendix E U.S Department of Agriculture Forest Service Road Use Permit	5 pages
Attachment B – Section 8-3 WELDING	6 pages

**End of Addendum No. 1**

  
\_\_\_\_\_  
Recommended by:  
Janel Gifford, P.E.  
Office Engineer

4/2/12  
Date

  
\_\_\_\_\_  
Approved by:  
Kimberly A. Kerr  
Interim Director of Transportation

4/2/12  
Date

U.S. Department of Agriculture  
Forest Service

**ROAD USE PERMIT**

**Permit # 03-55-12-001**

Authority:  
Acts of 6/30/14, 4/24/50, 6/12/60  
and 10/14/64; (16 USC 498, 572, 530 and  
532-38)

**Expiration Date: December 31, 2014**

**El Dorado County Department of Transportation** of 2850 Fairlane Ct., Placerville, CA 95667 (530) 621-5900  
Name Address and ZIP Code

(hereafter called the Permittee) is hereby granted the use of the following road(s) or road segments:

Road #17N12 – Ice House Road from its intersection with Wentworth Springs Road up to approximately mile post 3.50, to its intersection with Forest Road 14N07. Road #17N12 is a double lane asphalt surface road.

Road #14N07 – from its intersection with Road #17N12 (Ice House Road) up to approximately mile post 1.27, at its intersection with Wentworth Springs Road. Road #14N07 is a single lane chip seal surface road. See attached map, Exhibit "A".

on the Eldorado National Forest, subject to the provisions of this permit including clauses 1 through 19, on pages 1 through 5 for the purpose of hauling construction equipment and materials, and for the safe use by public and private users.

**PERMITTEE SHALL NOTIFY JIM KOLTUN AT (530) 622-5061, EXT. 5242 AT LEAST FIVE DAYS IN ADVANCE OF MOVING EQUIPMENT IN SO THAT ARRANGEMENTS CAN BE MADE FOR INSPECTION.**

**THE PERMITTEE SHALL NOTIFY THE ISSUING OFFICER PRIOR TO HAUL, AND AT LEAST FIVE WORKING DAYS PRIOR TO THE END OF USE TO ALLOW TIME FOR FINAL INSPECTION.**

**NOTE MAINTENANCE REQUIREMENTS ON WET WEATHER USE ON PAGES 3 and 4.**

The exercise of any of the privileges granted in this permit constitutes acceptance of all the conditions of the permit.

**1. WORK REQUIRED TO ACCOMMODATE PERMITTED USE.** In accordance with this use, the Permittee shall perform the work described below and in accordance with plans and specifications attached hereto: See Clause 15 - Road Maintenance Specifications, Clause 16 – Requirements, Clause 17 - Safety and Clause 18 - Communications.

**1A. Restrictions on use:** Permittee shall not haul construction equipment or construction materials from 3:30 P.M. Fridays until 6:00 A.M. Mondays to avoid high public use/access to the Rubicon Trail.

**1B. Permittee shall perform** spot brushing along roads in this permit as needed for vehicle clearance and sight distance improvement. Clearing shall be four (4) feet back from the edge of road minimum. Permittee shall perform spot surfacing as needed to repair damaged areas that are a result of his/her operations under this permit.

**1C. Equipment Cleaning**

All off-road equipment used on this permit shall be washed before moving into the project area so that the equipment is free of soil, seeds, vegetative material, or other debris that could contain or hold seeds of noxious weeds. "Off-road equipment" includes all logging and construction equipment and such brushing equipment as brush hogs, masticators, and chippers; it does not include log trucks, chip vans, service vehicles, water trucks, pickup trucks, and similar vehicles not intended for off-road use.

Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris. Disassembly of equipment components or specialized inspection equipment is not required. Permittee shall notify Jim Koltun at (530) 622-5061, ext. 5242 at least five days in advance of moving equipment in so that arrangements can be made for inspection.

If the permit area is known to contain noxious weeds, the equipment shall be cleaned before moving to other Forest Service System lands which do not contain noxious weeds.

2. **USE RECORDS.** Not applicable.

3. **COMPLIANCE WITH LAWS AND REGULATIONS.** The Permittee, in exercising the privileges granted by this permit, shall comply with the regulations of the Department of Agriculture and all Federal, State, county and municipal laws, ordinances or regulations which are applicable to the area or operations covered by this permit. Additional permits from other agencies may be required.

4. **USE NONEXCLUSIVE.** The privileges granted in this permit to use this road are not exclusive. The Forest Service may use this road and authorize others to use it at any and all times. The Permittee shall use said road in such manner as will not unreasonably or unnecessarily interfere with the use thereof by other authorized persons, including Forest Service.

5. **RULES GOVERNING USE.** The Permittee, its agents, employees, contractors or employees of contractors, shall comply with all reasonable rules prescribed by the Forest Service for control and safety in the use of this road and to avoid undue damage to the road. Such rules will include:

(1) Upon reasonable notice, closing the road or restricting its use when, due to weather conditions, or the making of alterations or repairs, unrestricted use would in Forest Service judgment, cause excessive damage, or create hazardous conditions.

(2) Upon reasonable notice, closing the road during periods when, in Forest Service judgment, there is extraordinary fire danger.

(3) Traffic controls, which in Forest Service judgment, are required for safe and effective use of the road by authorized users thereof.

(4) Prohibition upon the loading of logs on trucks while such trucks are standing on the roadway surface, except to recover lost logs.

(5) Prohibition on the operation on this road of any vehicles or equipment having cleats or other tracks, which will injure the surface thereof.

(6) Prohibition on the operation of log-hauling vehicles in excess of legal highway loads in the State.

(7) Regulation of the number of vehicles so as to prevent undue congestion of this road.

(8) The Permittee shall not use an "active ingredient" as defined in Section 2 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (86 Stat.973), in violation of said act on the land described in this permit.

(9) Prohibition of the taking of water from National Forest lands to be used in the dust abatement process.

6. **INSURANCE.** Permittee shall be required to carry public liability and property damage insurance for the operation of vehicles, in the amounts established by applicable State laws, cooperative agreements, or easements issued on the subject road or roads.

7. **MAINTENANCE.** The Permittee shall bear the expense of maintenance proportionate to his use. This expense will be borne by the performance of the maintenance on the road as specified in clause 15 through 16.

When deposits or payments are required in lieu of performance of maintenance the rate will be under clause 19 which is agreed to be the cost of such works; the deposits or payments to be made at such times and in such amounts as requested by the Issuing Officer; *Provided*, however, that the rate shall be revised upward or downward on 30<sup>th</sup> of April of each year hereafter, based on estimated costs and uses anticipated; *Provided* further, that payment shall not relieve the permittee from liability for repair of damages due to carelessness or negligence on its part or on the part of its contractors or agents.

Maintenance shall be performed in accordance with Forest Service specifications or requirements for maintenance as hereinafter listed, or as may be mutually agreed upon from time to time and shall consist of (1) current maintenance as necessary to preserve, repair, and protect the roadbed, surface and all structures and appurtenances, and (2) resurfacing equivalent in extent to the wear and loss of surfacing caused by operations authorized by this permit.

**See Clause 16**

8. **PERFORMANCE BOND.** In the event the Permittee is to perform his proportionate share of road maintenance, road resurfacing, or betterment, as determined and within time periods established by the Forest Supervisor, the Forest Service may require as a further guarantee of the faithful performance of such work that the Permittee furnish and maintain a surety bond satisfactory to the Forest Service in the sum of N/A dollars N/A , or in lieu of a surety bond, deposit into a Federal depository, as directed by the Forest Service, and maintain therein cash in the sum of N/A dollars N/A, or negotiable securities of the United States having market value at time of deposit of not less than N/A dollars N/A . As soon as security for the performance of road maintenance (and betterment) requirements or the settlement of claims incident thereto is completed, unencumbered cash guarantees or negotiable securities deposited in lieu of surety bond will be returned to the Permittee.

9. **FIRE PREVENTION AND SUPPRESSION.** The Permittee shall take all reasonable precautions to prevent and suppress Forest fires. No material shall be disposed of by burning in open fires during the closed season established by law or regulation without a written permit from the Forest Service.

10. **DAMAGES.** The Permittee shall exercise diligence in protecting from damage the land and property of the United States covered by and used in connection with this permit, and promptly upon demand shall pay the United States for and damage resulting from negligence, or from violation of the terms of this permit or of any law or regulation applicable to the National Forests, by the Permittee, or by his agents, contractors, or employees of the Permittee acting within the scope of their agency, contract, or employment.

11. **OFFICIALS NOT TO BENEFIT.** No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit that may arise here from unless it is made with a corporation for its general benefit.

12. **OUTSTANDING RIGHTS.** This permit is subject to all outstanding rights.

13. **SUSPENSION / TERMINATION.** Upon failure of the Permittee, its agents, employees, or contractors to comply with any of the requirements / clauses of this permit, the officer issuing the permit may terminate upon breach of any conditions herein and will notify Permittee within 24 hours. **December 31, 2014.**
14. In the event of any conflict between any of the preceding printed clauses or any provision thereof and any of the following clauses or provisions thereof, the following clauses will control.
15. **ROAD MAINTENANCE SPECIFICATIONS** The following specifications and those attached to this permit shall govern road maintenance made necessary by Permittee's road use and responsibilities for protecting roads from seasonal weather damage and for safeguarding soil and water.

### **REQUIREMENTS**

- 16-1 **SURFACE BLADING** Surface blading is keeping a native or aggregate roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the crown, inslope or outslope of traveled way, shoulder, drainage dips, leadoff ditches, berms, turnouts and provides a level of smoothness appropriate for the amount and kind of traffic served. The Permittee may be required to surface blade the entire length of road utilized for haul prior to haul, at the end of each haul season, and a final blading at the termination of haul. This surface blading will be done in conjunction with the use of a water truck to ensure the road surface is moist during each surface blading operation.
- 16-2 **WET WEATHER USE** Permittee shall cease all timber hauling when the surface becomes saturated or deformation begins. (The standard is, if more than 10 percent of the road surface is rutted 2 inches in depth or greater. Percentage will be determined in one mile increments if road is longer than one mile.) After the road surface has dried sufficiently to prevent deformation or other damage and repairs completed and approved by the Forest Service, use may begin. If the Permittee elects to continue to use the road, then the damaged section(s) shall be repaired and aggregate placed in two inch or more increment depths for the full width of the section until the section is stabilized. All repairs shall be completed as directed by the Forest Service.
- 16-3 **SURFACE PROTECTION** Permittee shall avoid contaminating aggregate or asphalt surfaces through covering them or hauling on them when conditions are to wet and muddy. Permittee may be required to haul and spread a load of aggregate to correct any contaminated sections on gravel roads. Permittee shall avoid blading surface course off road.
- 16-4 **DRAINAGE MAINTENANCE** Permittee shall keep ditches, culverts and other drainage facilities clear and functioning.
- 16-5 **SNOW REMOVAL** Snow removal will not be permitted, except as specifically authorized in writing.
- 16-6 **SAFETY / TRAFFIC CONTROL** When Permittee's operations are in progress adjacent to or on Forest Service controlled roads and trails open to the public travel, Permittee shall furnish, install and maintain all temporary traffic controls which provide the user with adequate warning of hazardous or potentially hazardous conditions associated with Permittee's operations. Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagman and devices shall be as specified in the Manual on Uniform Traffic Control Devices for Streets and Highways, (MUTCD).
- 16-7 **DUST ABATEMENT** Permittee shall abate dust to allow the safe use of the road and to prevent excessive loss of road material. A Dust Abatement Plan must be presented to the Forest Service in writing for approval. Water will be allowed as a dust abatement material. If water is not sufficient to abate the dust, then magnesium chloride will be required. Negotiations for the

use of water obtained from any source other than the Permittee's property will be the responsibility of the Permittee, and authorization to use such water will be documented in the Dust Abatement Plan.

16-8 **SNOW REMOVAL** Snow removal shall be done in a manner to preserve and protect the road to the extent necessary to insure safe travel by all users and to prevent excessive erosion damage to roads, streams, and adjacent lands.

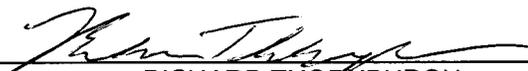
17. **SAFETY** Unless otherwise agreed in writing, when Permittee's operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Permittee shall provide the use with adequate warning of hazardous or potentially hazardous conditions associated with Permittee's operation. A specific traffic control plan for each individual project shall be agreed to by Permittee and Forest Service prior to commencing operations (See Clause 16-6). Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagger and devices shall be specified in the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD), and in specifications attached here to.

18. **COMMUNICATIONS** The Permittee will provide, post and maintain appropriate signs along the section(s) of road(s) pertinent to this permit. The permittee will report to the Forest Service any damage to or vandalism of the signs, any accidents, or incidents when users are stranded or vehicles are abandoned.

19. **ROAD USE PERMIT CHARGE.** Not Applicable.

This permit is accepted subject to all its terms and conditions.

ACCEPTED  3/14/12  
KIMBERLY A. KERR Date  
Interim Director of Transportation

APPROVED  3/20/2012  
RICHARD THORNBURGH Date  
District Ranger

## SECTION 8-3. WELDING

### 8-3.01 WELDING

#### GENERAL

Unless otherwise specified, Section 8-3, "Welding," shall apply to any welding that is specified to conform to an AWS welding code.

Requirements of the AWS welding codes shall apply unless otherwise specified in the Standard Specifications, on the plans, or in these special provisions. Wherever the abbreviation AWS is used, it shall be equivalent to the abbreviations ANSI/AWS or AASHTO/AWS.

Wherever reference is made to the following AWS welding codes in the Standard Specifications, on the plans, or in these special provisions, the year of adoption for these codes shall be as listed:

AWS Code	Year of Adoption
D1.1	2008
D1.3	2008
D1.4	2005
D1.5	2008
D1.6	2007
D1.8	2009

Flux cored welding electrodes conforming to the requirements of AWS A5.20 E6XT-4 or E7XT-4 shall not be used to perform welding for this project.

Unless otherwise specified, Clause 6.1.3 of AWS D1.1, paragraph 1 of Section 7.1.2 of AWS D1.4, and Clause 6.1.1.2 of AWS D1.5, are replaced with the following:

The QC Inspector shall be the duly designated person who acts for and on behalf of the Contractor for inspection, testing, and quality related matters for all welding.

Quality Assurance (QA) is the prerogative of the Engineer. The QA Inspector is the duly designated person who acts for and on behalf of the Engineer.

The QC Inspector shall be responsible for quality control acceptance or rejection of materials and workmanship.

When the term "Inspector" is used without further qualification, it shall refer to the QC Inspector.

Inspection and approval of all joint preparations, assembly practices, joint fit-ups, welding techniques, and the performance of each welder, welding operator, and tack welder shall be documented by the QC Inspector on a daily basis for each day welding is performed. For each inspection, including fit-up, Welding Procedure Specification (WPS) verification, and final weld inspection, the QC Inspector shall confirm and document compliance with the requirements of the AWS or other specified code criteria and the requirements of these special provisions on all welded joints before welding, during welding, and after the completion of each weld.

The Engineer shall have the authority to verify the qualifications or certifications of any welder, QC Inspector, or NDT personnel to specified levels by retests or other means approved by the Engineer.

When joint weld details that are not prequalified to the details of Clause 3 of AWS D1.1 or to the details of Figure 2.4 or 2.5 of AWS D1.5 are proposed for use in the work, the joint details, their intended locations, and the proposed welding parameters and essential variables, shall be approved by the Engineer. The Contractor shall allow the Engineer 15 days to complete the review of the proposed joint detail locations.

In addition to the requirements of AWS D1.1, welding procedure qualifications for work welded in conformance with this code shall conform to the following:

When a nonstandard weld joint is to be made using a combination of WPSs, a single test may be conducted combining the WPSs to be used in production, provided the essential variables, including weld bead placement, of each process are limited to those established in Table 4.5.

Upon approval of the proposed joint detail locations and qualification of the proposed joint details, welders and welding operators using these details shall perform a qualification test plate using the WPS variables and the joint detail to be used in production. The test plate shall have the maximum thickness to be used in production and a minimum length of 18 inches. The test plate shall be mechanically and radiographically tested. Mechanical and radiographic testing and acceptance criteria shall be as specified in the applicable AWS codes.

The Engineer will witness all qualification tests for WPSs that were not previously approved by the Department.

In addition to the requirements specified in the applicable code, the period of effectiveness for a welder's or welding operator's qualification shall be a maximum of 3 years for the same weld process, welding position, and weld type. If welding will be performed without gas shielding, then qualification shall also be without gas shielding. Excluding welding of fracture critical members, a valid qualification at the beginning of work on a contract will be acceptable for the entire period of the contract, as long as the welder's or welding operator's work remains satisfactory.

The Contractor shall notify the Engineer 7 days prior to performing any procedure qualification tests. Witnessing of qualification tests by the Engineer shall not constitute approval of the intended joint locations, welding parameters, or essential variables. The Contractor shall notify the Engineer using the "Standard TL-38 Inspection Form" located at:

<http://www.dot.ca.gov/hq/esc/Translab/OSM/smbforms.htm>

Clause 6.14.6, "Personnel Qualification," of AWS D1.1, Section 7.8, "Personnel Qualification," of AWS D1.4, and Clause 6.1.3.4, "Personnel Qualification," of AWS D1.5 are replaced with the following:

Personnel performing nondestructive testing (NDT) shall be qualified and certified in conformance with the requirements of the American Society for Nondestructive Testing (ASNT) Recommended Practice No. SNT-TC-1A and the Written Practice of the NDT firm. The Written Practice of the NDT firm shall meet or exceed the guidelines of the ASNT Recommended Practice No. SNT-TC-1A. Individuals who perform NDT, review the results, and prepare the written reports shall be either:

- A. Certified NDT Level II technicians, or;
- B. Level III technicians who hold a current ASNT Level III certificate in that discipline and are authorized and certified to perform the work of Level II technicians.

Clause 6.6.5, "Nonspecified NDT Other than Visual," of AWS D1.1, Section 7.6.5 of AWS D1.4 and Clause 6.6.5 of AWS D1.5 shall not apply.

For any welding, the Engineer may direct the Contractor to perform NDT that is in addition to the visual inspection or NDT specified in the AWS or other specified welding codes, in the Standard Specifications, or in these special provisions. Except as provided for in these special provisions, additional NDT required by the Engineer, and associated repair work, will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications. Prior to release of welded material by the Engineer, if testing by NDT methods other than those originally specified discloses an attempt to defraud or reveals a gross nonconformance, all costs associated with the repair of the deficient area, including NDT of the weld and of the repair, and any delays caused by the repair, shall be at the Contractor's expense. A gross nonconformance is defined as the sum of planar type rejectable indications in more than 20 percent of the tested length.

When less than 100 percent of NDT is specified for any weld, it is expected that the entire length of weld meet the specified acceptance-rejection criteria. Should any welding deficiencies be discovered by additional NDT directed or performed by the Engineer that utilizes the same NDT method as that originally specified, all costs associated with the repair of the deficient area, including NDT of the weld and of the weld repair, and any delays caused by the repair, shall be at the Contractor's expense.

Repair work to correct welding deficiencies discovered by visual inspection directed or performed by the Engineer, and any associated delays or expenses caused to the Contractor by performing these repairs, shall be at the Contractor's expense.

### **WELDING QUALITY CONTROL**

Welding quality control shall conform to the requirements in the AWS or other specified welding codes, the Standard Specifications, and these special provisions.

Unless otherwise specified, welding quality control shall apply to work welded in conformance with the provisions in the following:

- A. Section 49, "Piling," Section 52, "Reinforcement," Section 55, "Steel Structures," and Section 75-1.035, "Bridge Joint Restrainer Units," of the Standard Specifications
- B. "Structural Steel for Building Work" of these special provisions

Unless otherwise specified, Clauses 6.1.4.1 and 6.1.4.3 of AWS D1.1, paragraph 2 of Section 7.1.2 of AWS D1.4, and Clauses 6.1.3.2 through 6.1.3.3 of AWS D1.5 are replaced with the following:

The QC Inspector shall be currently certified as an AWS Certified Welding Inspector (CWI) in conformance with the requirements in AWS QC1, "Standard for AWS Certification of Welding Inspectors."

The QC Inspector may be assisted by an Assistant QC Inspector provided that this individual is currently certified as an AWS Certified Associate Welding Inspector (CAWI) in conformance with the requirements in AWS QC1, "Standard for AWS Certification of Welding Inspectors." The Assistant QC Inspector may perform inspection under the direct supervision of the QC Inspector provided the assistant is always within visible and audible range of the QC Inspector. The QC Inspector shall be responsible for signing all reports and for determining if welded materials conform to workmanship and acceptance criteria. The ratio of QC Assistants to QC Inspectors shall not exceed 5 to 1.

The Contractor shall designate in writing a welding Quality Control Manager (QCM). The QCM shall be responsible directly to the Contractor for the quality of welding, including materials and workmanship, performed by the Contractor and subcontractors.

The QCM shall be the sole individual responsible to the Contractor for submitting, receiving, reviewing, and approving all correspondence, required submittals, and reports to and from the Engineer. The QCM shall be a registered professional engineer or shall be currently certified as a CWI.

Unless the QCM is hired by a subcontractor providing only QC services, the QCM shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project. The QCM may be an employee of the Contractor.

The QCM shall sign and furnish to the Engineer, a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each item of work for which welding was performed. The certificate shall state that all of the materials and workmanship incorporated in the work, and all required tests and inspections of this work, have been performed in conformance with the details shown on the plans, the Standard Specifications, and these special provisions.

Welding inspection personnel or NDT firms to be used in the work shall not be employed or compensated by any subcontractor, or by other persons or entities hired by subcontractors, who will provide other services or materials for the project, except for the following conditions:

- A. The work is welded in conformance with AWS D1.5 and is performed at a permanent fabrication or manufacturing facility that is certified under the AISC Quality Certification Program, Category CBR, Major Steel Bridges and Fracture Critical endorsement F, when applicable.
- B. Structural steel for building work is welded in conformance with AWS D1.1 and is performed at a permanent fabrication or manufacturing facility that is certified under the AISC Quality Certification Program, Category STD, Standard for Steel Building Structures.

For welding performed at such facilities, the inspection personnel or NDT firms may be employed or compensated by the facility performing the welding provided the facility maintains a QC program that is independent from production.

Unless otherwise specified, an approved independent third party will witness the qualification tests for welders or welding operators. The independent third party shall be a current CWI and shall not be an employee of the contractor performing the welding. The Contractor shall allow the Engineer 15 days to review the qualifications and copy of the current certification of the independent third party.

Prior to submitting the Welding Quality Control Plan (WQCP) required herein, a prewelding meeting between the Engineer, the Contractor's QCM, and a representative from each entity performing welding or inspection for this project, shall be held to discuss the requirements for the WQCP.

Information regarding the contents, format, and organization of a WQCP, is available at the Transportation Laboratory and at:

<http://www.dot.ca.gov/hq/esc/Translab/OSM/smbresources.htm>

The Contractor shall submit to the Engineer, in conformance with the provisions in Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications, 2 copies of a separate WQCP for each subcontractor or supplier for each item of work for which welding is to be performed.

The Contractor shall allow the Engineer 15 days to review the WQCP submittal after a complete plan has been received. No welding shall be performed until the WQCP is approved in writing by the Engineer.

An amended WQCP or any addendum to the approved WQCP shall be submitted to, and approved in writing by the Engineer, for proposed revisions to the approved WQCP. An amended WQCP or addendum will be required for revisions to the WQCP, including but not limited to a revised WPS; additional welders; changes in NDT firms, QC, or NDT personnel or procedures; or updated systems for tracking and identifying welds. The Engineer shall have 7 days to complete the review of the amended WQCP or addendum. Work affected by the proposed revisions shall not be performed until the amended WQCP or addendum has been approved.

After final approval of the WQCP, amended WQCP, or addendum, the Contractor shall submit 7 copies to the Engineer of the approved documents. A copy of the Engineer approved document shall be available at each location where welding is to be performed.

All welding will require inspection by the Engineer. The Contractor shall request inspection at least 3 business days prior to the beginning of welding for locations within California and 5 business days for locations outside of California. The Contractor shall request inspection at:

<http://www.dot.ca.gov/hq/esc/Translab/OSM/smbforms.htm>

Continuous inspection shall be provided when any welding is being performed. Continuous inspection, as a minimum, shall include having a QC Inspector within such close proximity of all welders or welding operators so that inspections by the QC Inspector of each welding operation at each welding location does not lapse for a period exceeding 30 minutes.

A daily production log for welding shall be kept for each day that welding is performed. The log shall clearly indicate the locations of all welding. The log shall include the welders' names, amount of welding performed, any problems or deficiencies discovered, and any testing or repair work performed, at each location. The daily report from each QC Inspector shall also be included in the log.

The following items shall be included in a Welding Report that is to be submitted to the Engineer within 15 days following the performance of any welding:

- A. A daily production log.
- B. Reports of all visual weld inspections and NDT.
- C. Radiographs and radiographic reports, and other required NDT reports.
- D. A summary of welding and NDT activities that occurred during the reporting period.
- E. Reports of each application of heat straightening.
- F. A summarized log listing the rejected lengths of weld by welder, position, process, joint configuration, and piece number.
- G. Documentation that the Contractor has evaluated all radiographs and other nondestructive tests and corrected all rejectable deficiencies, and that all repaired welds have been reexamined using the required NDT and found acceptable.

The following information shall be clearly written on the outside of radiographic envelopes: name of the QCM, name of the nondestructive testing firm, name of the radiographer, date, contract number, complete part description, and all included weld numbers, report numbers, and station markers or views, as detailed in the WQCP. In addition, all interleaves shall have clearly written on them the part description and all included weld numbers and station markers or views, as detailed in the WQCP. A maximum of 2 pieces of film shall be used for each interleave.

Reports of all visual inspections and NDT shall be signed by the inspector or technician and submitted daily to the QCM for review and signature prior to submittal to the Engineer. Corresponding names shall be clearly printed or typewritten next to all signatures. Reports of all NDT, whether specified, additional, or informational, performed by the Contractor shall be submitted to the Engineer.

The Engineer will review the Welding Report to determine if the Contractor is in conformance with the WQCP. Except for field welded steel pipe piling, the Engineer shall be allowed 15 days to review the report and respond in writing after the complete Welding Report has been received. Prior to receiving notification from the Engineer of the Contractor's conformance with the WQCP, the Contractor may encase in concrete or cover welds for which the Welding Report has been submitted. However, should the Contractor elect to encase or cover those welds prior to receiving notification from the Engineer, it is expressly understood that the Contractor shall not be relieved of the responsibility for incorporating material in the work that conforms to the requirements of the plans and specifications. Material not conforming to these requirements will be subject to rejection.

For field welded steel pipe piling, including bar reinforcement in the piling, the Contractor shall allow the Engineer 2 business days to review the Welding Report and respond in writing after the required items have been received. No field welded steel pipe piling shall be installed, and no reinforcement in the piling shall be encased in concrete until the Engineer has approved the above requirements in writing.

In addition to the requirements in AWS D1.1 and AWS D1.5, third-time excavations of welds or base metal to repair unacceptable discontinuities, regardless of NDT method, and all repairs of cracks require prior approval of the Engineer.

The Engineer shall be notified immediately in writing when welding problems, deficiencies, base metal repairs, or any other type of repairs not submitted in the WQCP are discovered, and also of the proposed repair procedures to correct them. For requests to perform third-time excavations or repairs of cracks, the Contractor shall include an engineering evaluation of the proposed repair. The engineering evaluation, at a minimum, shall address the following:

- A. What is causing each defect?
- B. Why the repair will not degrade the material properties?
- C. What steps are being taken to prevent similar defects from happening again?

The Contractor shall allow the Engineer 7 days to review these procedures. No remedial work shall begin until the repair procedures are approved in writing by the Engineer.

Clause 6.5.4 of AWS D1.5 is replaced with the following:

The QC Inspector shall inspect and approve each joint preparation, assembly practice, welding technique, joint fit-up, and the performance of each welder, welding operator, and tack welder to make certain that the applicable requirements of this code and the approved Welding Procedure Specification (WPS) are met. The QC Inspector shall examine the work to make certain that it meets the requirements of Clauses 3 and 6.26. The size and contour of all welds shall be measured using suitable gages. Visual inspection for cracks in welds and base metal, and for other discontinuities shall be aided by strong light, magnifiers, or such other devices as may be helpful. Acceptance criteria different from those specified in this code may be used when approved by the Engineer.

In addition to the requirements of AWS D1.5, Clause 5.12 or 5.13, welding procedures qualification for work welded in conformance with that code shall conform to the following requirements:

- A. Unless considered prequalified, fillet welds shall be qualified in each position. The fillet weld soundness test shall be conducted using the essential variables of the WPS as established by the Procedure Qualification Record (PQR).
- B. For qualification of joints that do not conform to Figures 2.4 and 2.5 of AWS D1.5, a minimum of 2 WPS qualification tests are required. The tests shall be conducted using both Figure 5.1 and Figure 5.3. The test conforming to Figure 5.1 shall be conducted in conformance with AWS D1.5, Clause 5.12 or 5.13. The test conforming to Figure 5.3 shall be conducted using the welding electrical parameters that were established for the test conducted conforming to Figure 5.1. The ranges of welding electrical parameters established during welding per Figure 5.1 in conformance with AWS D1.5, Clause 5.12, shall be further restricted according to the limits in Table 5.3 during welding per Figure 5.3.
- C. Multiple zones within a weld joint may be qualified. The travel speed, amperage, and voltage values that are used for tests conducted per AWS D1.5 Clause 5.13 shall be consistent for each pass in a weld joint, and shall in no case vary by more than  $\pm 10$  percent for travel speed,  $\pm 10$  percent for amperage, and  $\pm 7$  percent for voltage as measured from a predetermined target value or average within each weld pass or zone. The travel speed shall in no case vary by more than  $\pm 15$  percent when using submerged arc welding.

- D. For a WPS qualified in conformance with AWS D1.5 Clause 5.13, the values to be used for calculating ranges for current and voltage shall be based on the average of all weld passes made in the test. Heat input shall be calculated using the average of current and voltage of all weld passes made in the test for a WPS qualified in conformance with Clause 5.12 or 5.13.
- E. Macroetch tests are required for WPS qualification tests, and acceptance shall be per AWS D1.5 Clause 5.19.3.
- F. When a nonstandard weld joint is to be made using a combination of WPSs, a test conforming to Figure 5.3 may be conducted combining the WPSs to be used in production, provided the essential variables, including weld bead placement, of each process are limited to those established in Table 5.3.
- G. Prior to preparing mechanical test specimens, the PQR welds shall be inspected by visual and radiographic tests. Backing bar shall be 3 inches in width and shall remain in place during NDT testing. Results of the visual and radiographic tests shall comply with AWS D1.5 Clause 6.26.2, excluding Clause 6.26.2.2. Test plates that do not comply with both tests shall not be used.

**PAYMENT**

Full compensation for conforming to the requirements of "Welding" shall be considered as included in the contract prices paid for the various items of work involved and no additional compensation will be allowed therefor.