

SECTION 01 11 13.00 25

GENERAL CONTRACT REQUIREMENTS
Jan 2014

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)

AASHTO LRFDUS (2012, ERTA 1) Bridge Design Specifications,
6th ed.

ASME INTERNATIONAL (ASME)

ASME B30.2-26 (2010) Crane Standards

ASME B30.22 (2010) Articulating Boom Cranes

ASME B30.3 (2009) Tower Cranes

ASME B30.5 (2011) Mobile and Locomotive Cranes

ASME B30.8 (2010) Floating Cranes and Floating Derricks

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

ASSE/SAFE Z359-PKG (2009) Fall Protection Code

ASTM INTERNATIONAL (ASTM)

ASTM C1077 (2013b) Standard Practice for Laboratories
Testing Concrete and Concrete Aggregates for
Use in Construction and Criteria for Laboratory
Evaluation

ASTM C1093 (2009) Standard Practice for Accreditation of
Testing Agencies for Masonry

ASTM C136 (2006) Standard Test Method for Sieve Analysis
of Fine and Coarse Aggregates

ASTM D3666 (2011) Standard Specification for Minimum
Requirements for Agencies Testing and
Inspecting Road and Paving Materials

ASTM D3740 (2012a) Minimum Requirements for Agencies
Engaged in the Testing and/or Inspection of
Soil and Rock as Used in Engineering Design and
Construction

ASTM D5268 (2007) Topsoil Used for Landscaping Purposes

ASTM E329 (2011c) Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (2010; Errata 2012) Standard for Portable Fire Extinguishers

NFPA 241 (2013) Standard for Safeguarding Construction, Alteration, and Demolition Operations

NFPA 51B (2009; TIA 09-1) Standard for Fire Prevention During Welding, Cutting, and Other Hot Work

NFPA 70 (2014) National Electrical Code

NFPA 70E (2012; Errata 2012) Standard for Electrical Safety in the Workplace

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 (2008; Errata 1-2010; Changes 1-3 2010; Changes 4-6 2011; Change 7 2012) Safety and Health Requirements Manual

ERDC/ITL TR-09-2 (2009) A/E/C CAD Standard

U.S. DEPARTMENT OF AGRICULTURE (USDA)

AMS Seed Act (1940; R 1988; R 1998) Federal Seed Act

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910 Occupational Safety and Health Standards

29 CFR 1910.95 Occupational Noise Exposure

29 CFR 1919 Gear Certification

29 CFR 1926 Safety and Health Regulations for Construction

29 CFR 1926.52 Occupational Noise Exposure

29 CFR 1926.101 Hearing Protection

40 CFR 112 Oil Pollution Prevention

40 CFR 260 Hazardous Waste Management System: General

40 CFR 262 Standards Applicable to Generators of Hazardous Waste

40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 279	Standards for the Management of Used Oil
40 CFR 302	Designation, Reportable Quantities, and Notification
40 CFR 355	Emergency Planning and Notification
40 CFR 68	Chemical Accident Prevention Provisions
49 CFR 171-178	Hazardous Materials Regulations
CPL 02-00-147	OSHA Control of Hazardous Energy - Enforcement Policy and Inspection Procedures

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. The following shall be submitted in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Schedule for Construction; G

Utility Outage or Utility Connection Request

Access Agreements and Work Areas; G

Work Plan; G

Security Procedures; G

Annual Antiterrorism and Operations Security Requirements; G

Temporary Electrical Wiring Plan; G

Contractor's Planned Equipment Methods; G

Plant and Equipment List; G

Loading Diagram; G

Lifting Diagram; G

Loading Plan for Cranes and Heavy Equipment; G

Disposal Plan; G

Crane Operators; G

Activity Hazard Analysis (AHA) Training Plan; G

Accident Prevention Plan (APP); G

Activity Hazard Analysis (AHA); G

Hazardous Energy Control Plan; G

Fall Arrest Plan; G

Scaffolding; G

Contractor Quality Control Plan; G

Construction Quality Management for Contractors

The Contractor shall furnish documentation that the Contractor Quality Control System Manager has completed the Corps of Engineers course titled "Construction Quality Management for Contractors."

Environmental Protection Plan; G

Erosion and Sediment Control Plan; G

Record Drawings Execution Plan; G

SD-06 Test Reports

Drug Prevention Program

Accident Reports

Crane Testing Reports

Daily CQC Report

Inspection Reports

SD-07 Certificates

Third Party Certification of Barge-Mounted Mobile Cranes

Certificate of Compliance

SD-11 Closeout Submittals

Completion Inspections; G

Final Record Drawings; G

1.3 CONTRACT ADMINISTRATION DATA

1.3.1 Meaning of Terms

a. Specification Sections of this Contract are generally written in the imperative mood. In sentences using the imperative mood, the subject, "the Contractor," is implied. Also implied in this language are "shall," "shall be," or similar words and phrases. In material specifications,

the subject may also be the supplier, fabricator, or manufacturer supplying material, products, or equipment for use on the project.

b. Wherever "directed," "required," "prescribed," or other similar words are used, the "direction," "requirement," or "order" of the Contracting Officer is intended. Similarly, wherever "approved," "acceptable," "suitable," "satisfactory," or similar words are used, the words mean "approved by," "acceptable to," or "satisfactory to" the Contracting Officer.

c. The word "will" generally pertains to decisions or actions of the Contracting Officer.

1.3.2 Contracting Officer

The Contracting Officer (CO) who signed this Contract is the primary Contracting Officer for the Contract. All correspondence shall be through the Contracting Officer or, upon notification, their authorized Representative (COR).

1.3.3 Serial Letter Correspondence

Send an original and electronic copies of all correspondence pertaining to this Contract to: USACE Small Projects Team, PO Box 2946, 333 SW First Ave., Portland, OR 97208. Letters shall be signed by the Project Manager or by assistants designated to act for the Project Manager.

1.3.3.1 Numbering

Number all letter correspondence sequentially, include the Contract number, description, and subject matter. Only discuss one subject per letter.

1.3.3.2 Subcontractors

Subcontractors shall not correspond with either the Resident or District offices; the Prime Contractor shall handle all correspondence.

1.3.3.3 Transmittals

Transmittals of signed pay estimates, payrolls, submittals, and other similar correspondence will not require a Serial Letter; use of a commercial transmittal form or speed letter is encouraged.

1.3.4 EM 385-1-1 Safety and Health Requirements Manual

In accordance with EM 385-1-1, the latest version of EM 385-1-1 in effect on the date of the Solicitation for this Contract will be contractually binding as part of this Contract. The latest version, including all errata and changes, shall be used for this Contract and is obtainable at <http://140.194.76.129/publications/eng-manuals/>.

1.3.5 Contractor Performance Evaluations

In accordance with the provisions of FAR Subpart 36.201, Evaluation of Contractor Performance, construction Contractor's performance will be evaluated throughout the performance of the Contract. For construction contracts awarded at or above \$650,000.00, USACE will evaluate Contractor's

performance and prepare a performance report using the Construction Contractor Appraisal Support System (CCASS). Past performance evaluations may also be prepared for construction contracts below \$650,000.

1.3.6 Labor Standards

The Contractor and all subcontractors shall comply with the following labor standards, statutes, and regulations: Davis-Bacon Act; Contract Work Hours and Safety Standards Act; Secretary of Labor's regulations (Parts 3 and 5, Subtitle A, Title 29, Code of Federal Regulations).

1.3.7 Coverage

Contract provisions relating to wages, overtime, payroll deductions, and other labor standards requirements cover foremen, laborers, and mechanics, including owner-operators of other than hauling equipment and other individual enterprises performing the duties of a laborer or mechanic.

1.3.8 Wages

Wages shall be paid at least once a week and be computed at hourly rates not less than those set forth in the Contract wage schedule, as set by the Davis-Bacon Act wage determinations, for the particular classifications of work performed.

1.3.9 Overtime

Pay overtime for work in excess of 40 hours in any workweek at not less than 1-1/2 times the basic rate of pay. Rates paid for fringe benefits are excluded in the computations of overtime.

1.3.10 Deductions

Deductions from wages earned may be only those that are permitted by the Copeland Act (Anti-Kickback) regulations.

1.3.11 Reporting

In accordance with Contract Clause 52.222-27, AFFIRMATIVE ACTION COMPLIANCE REQUIREMENTS FOR CONSTRUCTION, on a monthly basis submit Form CC-257, Monthly Employment Utilization Report, to Department of Labor.

1.3.12 Subcontracts

Subcontracts (first tier or otherwise) shall physically contain the labor standards provisions of the prime Contract. Subcontracts of any tier in excess of \$10,000 shall also contain Contract Clause 52.222-26, EQUAL OPPORTUNITY.

1.3.13 Payrolls

Prepare and submit correct Weekly Payrolls, including those of subcontractors. Incorrect and delinquent payrolls will delay processing of partial payment estimates. The Contractor is encouraged to use a commercially-available electronic system to process and submit certified payrolls to the Government. Use of electronic payrolls will expedite review of payrolls, reduce chances for error, expedite closeout, and decrease

potential for withholdings for payroll processing. Vendors with electronic payroll software compatible with QCS: Emars, Inc; Elation Systems, Inc; LCPTracker, Inc; Hill International, Inc; or an approved equal.

1.3.14 Drawings

Paper prints, electronic CAD, and PDF files submitted will become the property of the Government upon final acceptance.

1.4 CONTRACTOR'S OPERATIONS AND REQUIREMENTS

1.4.1 Schedule for Construction

a. Submit initial construction project schedule for Government approval in accordance with Contract Clause 52.236-15, SCHEDULES FOR CONSTRUCTION CONTRACTS. The schedule shall be consistent with the completion dates as specified in Contract Clause 52.211-10, COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK. The schedule will be used as a basis to evaluate the Contractor's progress for purposes of payment. Revise schedule monthly, or as required by the Government.

b. Other Contractor's work shall also be coordinated in accordance with Contract Clause 52.236-8, OTHER CONTRACTS. The Government will limit interference with the Contractor's work to the maximum reasonable extent and the Government and Contractor shall coordinate as necessary.

1.4.2 Inclement Weather Construction

The Contractor's schedule shall reflect adverse weather days in all weather dependent activities as defined in Contract Clause 52.236-4, PHYSICAL DATA. Protect work areas from inclement weather, wind damage, and precipitation so that no delay in the prosecution of critical work items, or damage to USACE property occurs. No time extensions will be authorized for materials, work in place, or equipment damaged due to negligence during periods of inclement weather.

1.4.3 Permits and Responsibilities

Obtain all permits and licenses for the work as required under Contract Clause 52.236-7, PERMITS AND RESPONSIBILITIES.

1.4.4 In-Water Work

a. In-Water Work Periods

The Government has established periods, described as "in-water work periods," coinciding with the annual cycles of fish migration and related allowed maintenance periods. In general, this is a work period that allows for work in the water, on the water, and adjacent to the water where the work might affect fish passage. The in-water work (IWW) period established for this Contract is: 12/1/2014 - 2/28/2015.

b. In-Water Work Activities

For purposes of this Contract, work items that shall be restricted to the IWW period, along with further work restrictions, are described below:

Placement of steel plate in the fish ladder.

1.4.4.5 Utility Outage or Utility Connection Request

Coordinate with CO and schedule work to hold outages to a minimum. Make written requests for utility outages and connections to the CO at least 14 calendar days in advance of the time required. Contractor will not be entitled to additional payment for utility outages and connections required to be performed outside the regular work hours.

1.4.4.6 Existing Site Conditions

Verify existing site conditions prior to beginning work. Include photos of access roads and work areas in first daily CQC report.

1.4.4.7 Preconstruction Meeting

The purpose of the Preconstruction conference is for the Contractor and the CO to become acquainted and explain the functions and operating procedures of their respective organizations, review project requirements, technical specs, and Contract administration procedures. Contractor representatives who have a responsibility or significant role in accident prevention on the project shall attend the preconstruction conference

1.4.4.8 Weekly Coordination Meetings

Hold weekly coordination meetings between the Contractor and Government. Provide meeting agenda one workday prior to meeting and include a 3-week lookahead schedule. Provide meeting notes no later than close of business the first workday following the meeting.

1.4.4.9 Contractor Employees

Ensure that all employees are capable of demonstrating adequate knowledge of tools, supplies, equipment, and techniques necessary to competently perform the work. All personnel employed by the Contractor shall be fully qualified in their respective fields to render the services necessary.

1.4.4.10 Access Agreements and Work Areas

Submit access procedures to and from the work site. Closure of existing roadways will not be allowed unless coordinated and approved by the Government. Provide flaggers, signs, lights, and/or other safeguards to safely control traffic when operating on or crossing access roads, arterial roads, or highways. Damage to all roads caused by the Contractor's operations shall be repaired to pre-construction conditions at the expense of the Contractor.

1.4.4.10.1 Work Plan

- a. Provide drawing(s) showing the layout of proposed area for use. Only Contractor and subcontractor parts trailers and lunch trailers, adequately and physically anchored to prevent overturning, may be allowed

in the Contractor work areas and these will be subject to CO and Project approval. Contractor shall provide transformer. No water supply is available at the trailer area.

b. All Contractor vehicles used for prosecuting the work shall have a Contractor sign or other permanent identification and shall carry the required insurance.

c. Site Restoration - Restore access roads and work area to pre-construction conditions. Including, but not limited to:

(1) Fill - General backfill shall consist of non-plastic, non-organic, free-draining, Granular Material. Particles retained on a No. 4 sized sieve, per [ASTM C136](#), shall be angular to sub-angular and of uniform density. General backfill shall be free of organics, deleterious materials, and contain no particles greater than 3 inches in diameter. Backfill shall be approved by the Contracting Officer.

(2) Topsoil - Topsoil shall be free of sticks, stones, roots, plants, weeds, and other debris and objectionable materials. After areas have been brought to indicated finish grade, incorporate soil conditioners into soil a minimum depth of 6 inches by disking, harrowing, tilling, or other method approved by CO in accordance with [ASTM D5268](#).

(3) Seed - Local native seed stock source, State-certified seed of the latest season's crop delivered in original sealed packages, bearing producer's guaranteed analysis for percentages of mixtures, purity, germination, weedseed content, and inert material in accordance with [AMS Seed Act](#).

1.4.10.2 Employee Access and Parking

Restrict Contractor's employee private vehicle parking areas to the area as agreed upon before construction or delivery. All Contractor employee vehicles shall have Government-furnished Project Parking Tags displayed at all times while the vehicles are on the project. Immediately return all Government-furnished Project Parking Tags to the Government for cancellation upon release of an employee, end of construction completion, or termination of the Contract. Failure to return any Government-furnished Parking Tags will result in a \$250 per item charge to the Contractor. This fee will be deducted from the Contractor's monthly payment at no additional cost to the Government. Contractor employees shall not be permitted to bring non-employees to the job site at any time.

1.4.10.3 Public Access

The public shall not have permanent access to the fish ladder located within the security fence. Provide barricades or temporary fencing to prevent the public from entering the Contractor's work areas as applicable.

1.4.11 Security Procedures

1.4.11.1 Project Security

- a. The Project is open to the public during daylight hours. Submit a procedure for approval for identification and control of employees entering or leaving the Project during the hours of closure.
- b. Arrangement and scheduling of working hours and crews shall be coordinated through the CO with the Project Staff. The working hours of the Project Staff are Mondays through Thursdays from 6:30 a.m. until 5:00 p.m. Fridays are non-working days. Working hours that extend past 5:00 p.m. weekdays or on weekends and holidays shall be coordinated through the CO and approved by the Project Staff.
- c. Security of the Contractor's property and items furnished under this Contract, until the Government accepts items, are the Contractor's responsibility whether stored inside or outside.
- d. All Contractor personnel, subcontractor personnel, suppliers, etc. shall comply with the Project's security policies. Salespersons or personnel seeking employment will not be permitted inside the Project. Costs associated with Contractor failure to comply with the Project security policies shall be at the expense of the Contractor.

1.4.11.2 Identification of Employees

- a. Submit a complete, updated and signed, list of all Contractor and subcontractor personnel, including their titles and intended working hours, who will be working on site prior to start of work. This listing shall be revised and resubmitted when personnel changes occur.
- b. Government-prescribed cards/keys:
 - (1) Obtain the Government-prescribed cards/keys from the Project Security Office prior to engaging in work on the project. For each employee requiring Government-prescribed card/key, submit a written request at least one week in advance of commencing work including, but not limited to the following:

Name of Contractor, name of employee, employee's birth date, employee's place of birth, employee's valid identification with photo, and other employee information as needed based on security level.
 - (2) Immediately return all Government-prescribed cards/keys to the Project Security Office upon the release of the employee, end of construction completion, or termination of the Contract. Failure to return any Government-prescribed cards/keys will result in a \$250 per item charge to the Contractor and may delay final payment. These fees will be deducted from the Contractor's monthly payment at no additional cost to the Government.
- c. Foreign Born Employees - At least 30 days in advance of the start of work by the employee, submit photocopies of the green card work permits and/or passports to the CO of all Contractor employees who are foreign born and have non-citizen status. Contractor personnel who fit the above description of non-citizenship shall not be permitted to work until they pass the security check in addition to other requirements of this Contract.

1.4.12 ANNUAL ANTITERRORISM AND OPERATIONS SECURITY REQUIREMENTS

Costs associated with the following execution of training and verification requirements shall be at the expense of the Contractor. Facilitate the following training and submit the following:

a. AT Level 1 Training - Thirty calendar days prior to mobilization, all Contractor employees, to include subcontractor employees, requiring access to army installations, facilities, and controlled access areas shall complete AT Level 1 Training. Submit roster of training completion for each affected Contractor employee and subcontractor employee to the CO within five calendar days after completion of training by all employees and subcontractor personnel. Obtain training DVD from the CO through the Portland District Security Office (estimated training time 10 minutes per individual).

b. iWATCH and/or CorpsWatch Training - Thirty calendar days prior to mobilization and within 30 calendar days of new employees commencing performance, all Contractor employees, to include subcontractor employees, shall complete the iWatch, CorpsWatch Training, See Something Say Something training. Use this training to inform employees of the types of behavior to watch for and instruct employees to report suspicious activity to the CO. Submit signed roster for each Contractor employee and subcontractor employee to the CO within five calendar days after completion of training. Obtain training DVD from the CO through the Portland District Security Office (estimated training time five minutes per individual).

c. OPSEC Training - Thirty calendar days prior to mobilization, submit OPSEC Training signed statement for each Contractor employee and subcontractor employee to the CO within five calendar days after completion of training. Obtain training DVD from the CO through the Portland District Security Office (estimated training time 15 minutes per individual).

d. E-Verify - Pre-screen Contractor and subcontractor personnel, using the E-Verify Program at <http://www.uscis.gov/E-verify> to meet the established employment eligibility requirements. Two valid forms of Government issued identification will be required per individual to ensure the correct information is entered into the E-verify system. Submit a list of verified/eligible personnel to the CO within three days of Notice to Proceed.

1.4.13 Deck Access Restrictions

Do not block operational areas of the deck gantry crane at any time. With prior coordination and approval, the deck gantry crane may be blocked for a period no longer than four hours. One lane of traffic shall be left open at all times.

1.4.14 Utilities

Provide utilities required for the performance of work under this Contract, except: Government-furnished electrical power, water, and compressed air where available.

1.4.14.1 Sanitary Facilities

Use of the Project restroom by Contractor personnel will not be permitted. Provide portable, temporary sanitary facilities in accordance with EM 385-1-1.

1.4.14.2 Electrical Power

a. General - Government-furnished or public utility electrical power is not available for the Contractor's use.

b. Temporary Electrical Wiring - Submit a [Temporary Electrical Wiring Plan](#) for temporary electrical wiring. Install all temporary electrical wiring in accordance with EM 385-1-1 and as approved. All temporary electrical wiring shall be removed prior to completion of the Contract.

c. Performance of Electrical Work - When work requires Contractor to work near energized circuits as defined by the NFPA 70, personnel shall use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, safety glasses, and arc flash protection. Portable extension cords shall meet the requirements of EM 385-1-1, NFPA 70E, and OSHA electrical standards.

1.4.14.3 Telephone

Telephone will not be available for Contractor use.

1.4.14.4 Water

Reasonable amounts of water for domestic use will be made available from existing outlets and supplies.

1.4.15 Contractor's Equipment

Within seven days prior to commencing site operations, provide a complete list of all plant and equipment to be used on the job site, exclusive of shop equipment.

1.4.15.1 Contractor's Planned Equipment Methods

Submit proposed methods of transportation and operation of cranes and other heavy equipment for approval prior to commencement of those operations. Include the type, size, and loadings of equipment, and the proposed transportation routes and work areas to be used on the project. All cranes, rigging, lifts, operators, vehicles, and other necessary means to move equipment or items shall be Contractor-furnished as required to pursue and complete the work and shall comply with and tested in accordance with EM 385-1-1. Crane testing shall be witnessed by the CO, provide 48 hours of notice prior to test.

1.4.15.2 Plant and Equipment List

Indicate dates of the most recent and planned inspections; and adequate identification or description of each item of equipment including manufacturer's name (abbreviated), model number, manufacturer's serial

number, year of manufacture, and Contractor's assigned serial or record number.

1.4.15.3 Movement of Equipment by the Contractor

a. Unless otherwise noted, any vehicle crossing a project bridge is limited to **AASHTO LRFDUS**, HL-93 vehicle and load requirements. Submit a **loading diagram** for approval showing wheel loads, wheel spacing, and travel speed a minimum of 30 days prior to operating any equipment or vehicles in excess of 72,000 pounds gross vehicle weight (GVW) and axle loads of 32,000 pounds. Prior coordination and approval for such loads shall be obtained before proceeding. No exclusion trucks, multi-axle specialized hauling vehicles (SHV) or mobile cranes will be allowed on a bridge deck without prior review and approval. At a minimum, the loading diagram shall include but not be limited to the following information:

(1) A typical section and plan view of the bridge, the position of the wheel loads and wheel spacing of the truck or crane.

(2) The GVW of the vehicle and all axle weights.

(3) For cranes, the location and weight of axles before and after counter weights are installed, all outrigger loads, required crane boom length, weight and location of center of gravity. This should also include the effects of guy lines, upper spreader and jib mast. If using a jib, show the length, weight, and location of the center of gravity.

b. Any SHV's authorized to drive on the bridge deck shall have all lift axles lowered and fully engaged while the vehicle has any load. For cranes, all specialized boom trailers shall be engaged until a final set up with the outriggers are made and approved.

1.4.15.4 Contractor Use of Government Cranes

Unless otherwise noted, the Contractor will not be allowed to use Government cranes for any work or access.

1.4.16 Cranes and Heavy Equipment

1.4.16.1 General

a. Contractor's cranes and equipment furnished for this work shall conform with all applicable OSHA requirements, **EM 385-1-1**, and Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATE I.

b. Fourteen days prior to beginning site work, submit for approval a **Lifting Diagram** addressing such issues as maximum load, maximum wind speed, lifting radius, and all other applicable information required by **EM 385-1-1** and OSHA. Include deck protection, prior to using any cranes on the deck.

1.4.16.2 Contractor's Cranes and Heavy Equipment

Coordinate with the CO and submit **loading plan for cranes and heavy equipment** for Government approval. Include the planned method of transportation and operation of Contractor-furnished cranes and other heavy equipment to be used

in the performance of this Contract, the type, size, loading, and placement of outriggers of all cranes or heavy equipment, and the proposed transportation routes and work areas to be used on the project. Operation of heavy equipment adjacent to existing structures shall be avoided when possible.

1.4.17 Noise Control

a. Noise control and noise levels shall conform to requirements set forth in the appropriate regulations, including EM 385-1-1, Section 05.C, 29 CFR 1910.95, 29 CFR 1926.52, and 29 CFR 1926.101. The most conservative requirement shall govern.

b. Nighttime Noise Limitations - During construction, the noise levels, as measured from the nearest dwelling, shall not exceed 50 decibels during the hours from 2000 hours to 0700 hours.

1.4.18 Use of Explosives

Use of explosives will not be permitted.

1.4.19 Disposition of Materials

Submit the location of the Contractor's offsite disposal area and a plan for safe disposal of material in the Disposal Plan. Dispose of all demolished material and miscellaneous materials off-site in conjunction with paragraph ENVIRONMENTAL PROTECTION, and in accordance with all local, State, and Federal rules and regulations.

1.4.19.1 Daily Cleanup and Disposal

Keep all work areas reasonably neat on a daily basis. Collect, remove, and dispose of all debris resulting from the work, such as waste metalwork, packing cases, scrap lumber, and other debris off-site at least once per week. Do not use the Government's trash cans, dump boxes, and other containers. Keep the trailer and employee parking areas free of litter and debris. Provide trash receptacles, which are adequately secured to provide protection from the wind and animals, and empty daily. All costs of removing debris shall be incidental to the work, and therefore, no separate payment will be made.

1.4.19.2 Disposal of Equipment and Miscellaneous Materials

Title to all materials and equipment to be disposed of will be vested in the Contractor when beginning disassembly work or when such materials and equipment are designated as scrap. The Government will not be responsible for the condition, loss, or damage to such property after title transfer. The Contractor may retain these items in usable form and take possession of them providing that there is no subsequent cost or inconvenience to the Government. The Government does not guarantee that these items are complete or in working order and the Contractor shall assume responsibility for any damages caused by their use immediately upon taking possession of them.

1.4.20 Care of Drains

Do not dispose of waste in drains.

1.4.21 Protection of Material, Work, and Existing Utilities

a. Protect and preserve all materials, supplies, tools, equipment and Government property. If not adequately protected, such property may be protected by the Government and the cost thereof will be charged to the Contractor or deducted from any payment due.

b. Comply with Contract Clause 52.236-9, PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS. Repairs shall be made immediately and at Contractor's expense.

1.5 SUMMARY OF WORK

1.5.1 Project Description

The work includes construction of lamprey passage improvements in the adult fishways at Bonneville Lock and Dam. The improvements include fabrication and installation of stainless steel fish orifice invert plating near floor diffuser and incidental related work. This effort is to include all associated works required and described within this Contract package.

1.5.2 Location

The work shall be located at Bonneville Lock and Dam. Contractor access to the work site will be from the Washington State (North) Side.

1.5.3 Government-Furnished Material and Equipment

Pursuant to Contract Clause 52.245-1, GOVERNMENT PROPERTY, the Government will furnish the following materials and equipment for installation by the Contractor:

ITEM NO.	DESCRIPTION	QUANTITY
1	Plate Kind - D	6
2	Plate Kind - F	50

a. Quantities indicated for the above-listed items marked with an asterisk are estimates. It is the intention of the Government to furnish all quantities of the asterisk items required to complete the work as specified and the various quantities will be adjusted when necessary.

b. Quantities stated for the above items not marked with an asterisk are all that will be furnished by the Government. Contractor shall furnish any additional quantities required.

1.6 MEASUREMENT AND PAYMENT

a. In each instance, the Contract price for an item will constitute full compensation as herein specified, as shown, or as otherwise approved. The Contract price and payment will also constitute full compensation for all work incidental to completion of the item, unless such work is otherwise specifically mentioned for separate payment under another line item. In the event any work is required by the specifications Sections or by the Drawings and not specifically mentioned in the measurement and

payment paragraphs, separate or direct payment will not be made and all costs thereof are incidental to the work and included in the Contract prices and payments for all Contract Line Item Numbers (CLIN) listed in the price schedule.

b. As stated in Section 00700 Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, the word "provided" shall be understood to mean "furnished and installed" when used in this Section or elsewhere in the Specification Sections.

1.6.1 Unit Price Payment Items

Payment items for the work of this Contract on which the Contract unit price payments will be made are listed in Section 00010, PRICE SCHEDULE, and described below. The unit price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of as-builts, tests and reports, meeting safety requirements; and for performing all work required for each of the unit price items.

1.6.2 Job Payment Items

Payment items for the work of this Contract for which Contract job payments will be made are listed in Section 00010, PRICE SCHEDULE, and described below. All costs for items of work, which are not specifically mentioned to be included in a particular job item, shall be included in the listed job item most closely associated with the work involved. The job price and payment made for each item listed will constitute full compensation for furnishing all plant, labor, materials, and equipment; performing all associated Contractor quality control, environmental protection, commissioning, preparation of as-builts, tests and reports, meeting safety requirements; and for performing all work required for which separate payment is not otherwise provided. A schedule of values for job items shall be provided with each payment request.

1.6.3 Services of Miscellaneous Hire Items for Government Directed Work

Skilled craftsman hire measurement of time will be units of man-hours, with a man-hour defined as one person working as directed for a period of 60 minutes. To qualify as services of miscellaneous hire, the directed work will be additional to that necessary to comply with Specifications requirements. Time will be computed by rounding off to the next higher one-half hour. No separate measurement for supervision, helper labor, overhead and/or other markups, miscellaneous power, hand tools, equipment, and consumables for that craftsmen will be made as they are incidental to the service being furnished.

MANDATORY ITEMS

1.6.4 Mobilization and Demobilization, CLIN 0001

a. Measurement: Measurement will be made as a job for mobilizing and demobilizing all plant, equipment, fuel, supplies, materials, and personnel to and from the job site. This Contract Line Item Number (CLIN) applies to the Prime Contractor and all subcontractor mobilization and demobilization.

b. Payment: Payment will be made at the Contract amount under CLIN 0001 at a rate of 60 percent for mobilization and 40 percent for demobilization as defined in Contract Clause 252.236-7004, PAYMENT FOR MOBILIZATION AND DEMOBILIZATION (Dec 1991).

1.6.5 Stainless Steel Plates, CLIN 0002

a. Measurement: Measurement will be made as a lump sum providing all labor, plant, equipment, materials, and incidentals required for installing stainless steel plates (including Government Furnished Plates) throughout the fish ladder at The Bonneville 2nd Powerhouse as shown on the drawings.

b. Payment: Payment will be made at the Contract amount under CLIN 0002, "SS Plates".

OPTIONAL ITEMS

1.6.6 Skilled Craftsmen Hours (Optional), CLIN 0003

a. Measurement: When so directed by the CO, furnish up to 100 hours of skilled craft labor. Skilled Craftsmen Hours shall be measured by the individual hours of worker effort for assigned work scope as needed during the on-site Contract work. Work not specified for payment under other Line Items will be paid by use of Skilled Craftsmen Hours. Skilled Craftsmen Hours shall include the Davis Bacon prevailing wage hourly labor, tools, and incidental materials required for the directed tasks.

b. Payment: Payment for CLIN 0003, Skilled Craftsmen Hours will be made at the hourly rates for the craft performed. The labor rate shall be similar to the value of a welder or machinist and related equipment. The total cost of labor supplied under CLIN 0003 shall not exceed the amount shown on the Price Schedule.

1.6.7 Miscellaneous Materials (Optional), CLIN 0004

a. Measurement: Purchase miscellaneous parts and materials as directed by the Contracting Officer.

b. Payment: Payment for CLIN 0004 will be made as reimbursement for the actual cost plus 15 percent of the parts and materials purchased. Prepare and submit invoices and signed purchase orders for parts and materials, including shipping charges, for payment. The total cost of items covered under CLIN 0004 shall not exceed the amount shown on the Price Schedule.

1.7 GOVERNMENTAL SAFETY REQUIREMENTS

Comply with [EM 385-1-1](#), [NFPA 241](#), [ASME B30.2-26](#), the APP, the AHA, Federal and/or State OSHA regulations, and other related submittals and activity fire and safety regulations. The most stringent standard shall prevail.

1.7.1 [Drug Prevention Program](#)

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employee uses illegal

drugs, in accordance with Federal law, or consumes alcohol during work hours. During the Contract period a copy of tests, to include results of random testing, shall be submitted to the CO. No personal data shall be submitted, only numbers of individuals tested and results of tests.

1.7.2 Site Qualifications, Duties, and Meetings

1.7.2.1 Personnel Qualifications

a. Site Safety and Health Officer (SSHO)

(1) Provide a Safety oversight team that includes a minimum of one competent person to function as the SSHO. The SSHO shall meet the requirements of EM 385-1-1, Section 1, and ensure that the requirements of 29 CFR 1926 are met for the project. The SSHO shall be at the work site at all times to implement and administer the Contractor's safety program and Government-accepted Accident Prevention Plan. The SSHO's training, experience, and qualifications shall be as required by EM 385-1-1 paragraph 01.A.17 and all associated subparagraphs.

(2) Provide a Competent Person for all of the hazards identified in the Contractor's Safety and Health Program in accordance with the accepted Accident Prevention Plan, and shall be on-site at all times when the work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) for acceptance by the CO in consultation with the Safety Office.

(3) The Contractor Quality Control (CQC) manager can be the SSHO on this project.

(4) Experience and Training:

(a) A minimum of five years construction industry safety experience on similar projects.

(b) Thirty-hour OSHA Construction safety class or equivalent within the last four years.

(c) At least 24 hours of formal safety training every four years.

(d) Competent person training as needed.

b. Alternate SSHO - Qualifications for an alternate SSHO's shall equal that of the designated SSHO. Competent Person training as needed. Alternate SSHO's are intended to be on-site during the times that the lead SSHO is absent from the work site. The alternate SSHO may be assigned other duties while performing SSHO duties.

1.7.2.2 Crane Operators

Meet the crane operator's requirements in EM 385-1-1, Section 16 and Appendix I; ASME B30.2-26; 29 CFR 1910; and 29 CFR 1926. Provide proof of current qualification.

1.7.2.3 Personnel Duties

Site Safety and Health Officer (SSHO) Duties - Failure to perform the following duties will result in dismissal of the superintendent, QC manager, SSHO, and a project work stoppage will go into effect pending approval of a suitable replacement. The SSHO shall:

- a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Daily Contractor Quality Control Report.
- b. Conduct mishap investigations and complete required reports. Maintain the OSHA Form 300 and Daily Contractor Quality Control Report for prime and subcontractors.
- c. Maintain applicable safety reference material on the job site.
- d. Attend the pre-construction conference, pre-work meetings including the Contractor Quality Control Preparatory Phase inspection meeting, Initial Phase inspection meetings, Follow-up Phase, additional Preparatory and Initial Phase meetings, and periodic in-progress meetings.
- e. Implement and enforce accepted APPs and AHAs.
- f. Maintain a safety and health deficiency tracking system that monitors outstanding deficiencies until resolution. Post a list of unresolved safety and health deficiencies on the safety bulletin board.
- g. Ensure subcontractor compliance with safety and health requirements.
- h. Maintain a list of hazardous chemicals on site and their safety data sheets (SDS).

1.7.2.4 Meetings

- a. Safety Meetings - Conduct weekly safety meetings at the project site for all employees as required by EM 385-1-1. The CO shall be informed of the meeting in advance and be allowed attendance. Minutes showing Contract title, signatures of attendees, and a list of topics discussed shall be attached to the Daily Contractor Quality Control Report.
- b. Work Phase Meetings - Appropriate AHA's shall be discussed during CQC work phase meetings as required in paragraph QUALITY CONTROL.

1.7.3 Training

New Employee Indoctrination - Inform new employees (prime and subcontractor) of specific site hazards before they begin work. Keep documentation of this orientation on file at the project site.

- a. Periodic Training - Provide Safety and Health Training in accordance with EM 385-1-1 and the accepted APP. Ensure all required training has been accomplished for all onsite employees.

b. **Activity Hazard Analysis (AHA) Training Plan** - Prior to beginning a new phase, training shall be provided to all affected employees to include a review of the AHA to be implemented.

d. **Fall Protection Training Program** - Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, provide training for each employee who might be exposed to fall hazards, see subparagraph Fall Hazard Protection and Prevention Program. Provide training by a Competent person for fall protection shall in accordance with **EM 385-1-1**, Section 21.B. Training and evaluations for fall protection and rescue shall be documented and retained for the current training program per **ASSE/SAFE Z359-PKG**.

1.7.4 **Accident Prevention Plan (APP)**

Use a qualified person to prepare the written APP. At least 15 calendar days prior to the Preconstruction Conference, submit the APP in accordance with the requirements of **EM 385-1-1**, Appendix A entitled Minimum Basic Outline for Accident Prevention Plans.

Include .

1.7.5 **Activity Hazard Analysis (AHA)**

The Activity Hazard Analysis (AHA) format shall be in accordance with **EM 385-1-1**. Submit the AHA for review at least 15 calendar days prior to the start of each phase. Format subsequent AHAs as amendments to the APP.

1.7.6 **Display of Safety Information**

Within one calendar day after commencement of on-site work, erect a Safety and Health Bulletin Board at the job site. Include and maintain information on safety bulletin board as required by **EM 385-1-1**, Section 01.A.06.

1.7.7 **Site Safety Reference Materials**

Maintain safety-related references applicable to the project, including those listed in paragraph entitled REFERENCES. Maintain applicable equipment manufacturer's manuals.

1.7.8 **Emergency Medical Treatment**

Contractors shall arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment.

1.7.9 **Project Safe Clearance Procedure**

1.7.9.1 **General**

Prior to beginning work, submit a **Hazardous Energy Control Plan** in accordance with **EM 385-1-1**. Ensure that each employee is familiar with and complies with the Lockout/Tagout Safe Clearance procedures in **EM 385-1-1** and **CPL 02-00-147**. Provide instruction and training for personnel that have any involvement with electrical equipment or lines; mechanical equipment; pressure systems; and vessels and lines containing dangerous or hazardous material which can be energized, pressurized, activated, or released remotely or inadvertently. This requirement also applies to any interface of ongoing

Project operations. All work requiring a clearance under EM 385-1-1 and Project Specific Safe Clearance Procedures shall be coordinated with the Government at least 24 hours in advance. No work shall proceed until the proper clearances have been obtained from the Government and the Contractor has signed and locked onto the principal authorized clearance. Where the requirements of this specification and referenced documents vary, the most stringent requirements shall apply.

1.7.9.2 Safe Clearance Procedure System

A safe clearance system is used by Project Personnel to ensure continuity of service and safety to personnel and equipment. Any work, service, or delivery performed which requires taking Project operating equipment out of service shall be done only after a formal clearance is obtained through the Project POC. Clearance shall not be violated by Contractor personnel. Any violation of Safe Clearance Procedures will be grounds for removal of the offender(s) from the project. The use of locks and tags is required in the Projects Safe Clearance Procedure for all clearance points that locks can be applied. Where locks cannot be applied, apply Project Clearance Tags. Equipment locks, keys, and a lockbox will be supplied and installed by the Government. The keys to the Government-supplied locks will be placed in the lockbox and locked with a Government lock; the Contractor shall provide keyed lock(s) for this lockbox for Contractor personnel working under Safe Clearance. The use of personal locks for individuals working under Safe Clearance is required by CPL 02-00-147. Provide locks for Contractor personnel.

1.7.10 Reports

1.7.10.1 Accident Notification

Notify the CO as soon as practical, but no more than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents; accidents meeting EM 385-1-1, Section 01.D.02, to include cranes and rigging; or property damage equal to or greater than \$2,000. In conjunction with Section 00700 Contract Clause 52.236-13 Alt I, ACCIDENT PREVENTION - ALTERNATIVE I, and EM 385-1-1 report monthly the total manhours expended at the project site by all employees including subcontractors. The reporting period will start at 12:01 a.m. the first day of each month and end as of midnight on the last day of each month. Reporting shall be made by telephone to the CO and Small Project's Team POC prior to the 5th day of the following month.

1.7.10.2 Accident Reports

All accidents involving property damage, fires, personal equipment, and all injuries to the public, regardless of degree, shall be submitted to the CO on ENG Form 3394 within five calendar days of the accident, unless otherwise specified, and according to the schedule which follows:

a. Investigation and Reporting

- (1) Conduct an accident investigation for recordable injuries and illnesses, for medical treatment, property damage accidents resulting in at least \$20,000 in damages, and near misses as defined in EM 385-1-1, to establish the root cause(s) of the accident. Complete and submit ENG Form 3394.

(2) Conduct an accident investigation for any crane and rigging accident (including rigging gear accidents) to establish the root cause(s) of the accident. Complete and submit ENG Form 3394. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the CO.

(3) Notify the CO by the most expeditious means available of all fatal and permanent total disability injuries, three or more persons hospitalized, all property damage of \$500,000 or more, and structural damage involving a question of structural adequacy. All incidents involving disabling injury or an injury which may result in an employee's lost time, or property damage of \$2,000 or more shall be reported to the CO by telephone as soon as possible and in all cases within four hours.

(4) In all accidents enumerated in sub item (3), the Contractor shall investigate the circumstances before the scene of the accident is changed, take corrective action, and within 48 hours complete and submit ENG Form 3394 to the CO.

(5) In the event of an accident involving a fatality, permanent total disability, hospitalization of three or more persons, or property damage of \$500,000 or more, promptly suspend all operations at the scene of the accident and notify the CO and of the occurrence. Immediately provide for the rescue and/or care of the injured. Except in situations where safety may be compromised, restrict access to the area and leave the scene undisturbed until investigated by a Government appointed board of investigation and until the Contractor is authorized to resume operations.

(6) If property damage and injury result from the same accident, the consequence may be noted on the same ENG Form 3394. If more than one person is injured in a single accident, submit one ENG Form 3394 for each person injured. The Resident Office staff will provide the required forms and assist in their preparation immediately upon notification of an accident.

b. Types of Accidents and Reports. For each accident that results in a consequence or combination of the consequences listed below, complete and submit ENG Form 3394 to the CO. Please note that these reports cannot be used for any purpose other than accident reporting.

(1) Disabling injury (including death). Known suicide or deaths from natural causes are not reportable.

(2) Damage of \$2,000 or more to the Contractor's property or equipment caused by the Contractor while executing the Contract.

(3) Accidents caused by flood, hurricane, tornado, fire, navigation, wind, ice, etc., and structural failure in excess of \$2,000.

1.7.11 Hot Work

Submit and obtain a written permit prior to performing "Hot Work" from the CO. Provide fire extinguishers and fire watch in accordance with EM 385-1-1. The Fire Watch shall be trained in accordance with NFPA 51B.

1.7.12 Fall Hazard Protection and Prevention Program

- a. Designate a Qualified person to establish, prepare, and sign a fall protection and prevention (FP&P) plan for the protection of all employees exposed to fall hazards in accordance with ASSE/SAFE Z359-PKG and EM 385-1-1.
- b. Work Over Water - Prepare and submit a fall arrest plan which complies with the requirements of EM 385-1-1 and the Projects , see Attachment .

1.7.13 Scaffolding

Scaffolding shall comply in every respect with EM 385-1-1. Delineate fall protection requirements when working above 6 feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of work.

1.7.14 Equipment

1.7.14.1 Material Handling Equipment

Material handling equipment shall comply with ASME B30.2-26 and EM 385-1-1.

1.7.14.2 Cranes, Hoists, and Rigging

- a. Equip cranes and derricks in accordance with EM 385-1-1.
- b. Perform all testing and comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5).
- c. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks, and NFPA 10 for fire extinguisher requirements.
- d. Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by the CO.

1.7.14.3 Third Party Certification of Barge-Mounted Mobile Cranes

Barge-mounted mobile cranes shall be certified in accordance with 29 CFR 1919 and ASME B30.8, by an OSHA accredited person.

1.7.14.4 Crane Testing Reports

Submit crane inspection and testing reports required in accordance with Section 16 and Appendix I of EM 385-1-1, ASME B30.2-26, and as specified herein with the daily reports of inspections.

1.7.14.5 Certificate of Compliance

Provide a Certificate of Compliance for each crane entering an activity under this Contract. State within the certificate that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance comply with 29 CFR 1926 and EM 385-1-1. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used and in the proper use of all safety devices. Post certifications on the crane.

1.7.15 Excavations

1.7.15.1 Soil Classification

Soil classification shall be performed by a competent person in accordance with EM 385-1-1.

1.7.15.2 Utility Locations

All underground utilities in the work area shall be positively identified by a third party, independent, private utility locating company in addition to any station locating service and coordinated with the station utility department.

1.7.15.3 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system.

1.8 QUALITY CONTROL

1.8.1 Payment

Separate payment will not be made for providing and maintaining an effective Quality Control system, and all associated costs will be included in the applicable unit prices or job prices contained in the Price Schedule.

1.8.2 Project Superintendent

Identify an individual, within the onsite work organization, as Project Superintendent. The Project Superintendent shall be a Journeyman with a minimum of five years experience in a verifiable Project Superintendent role on jobs similar to this Contracts; identify an alternate meeting these same requirements. The designated Project Superintendent shall be acceptable to the CO. The Project Superintendent shall be held responsible for the quality of work on the job, maintain a physical presence at the site at all times, and is subject to removal by the CO for non-compliance with the quality requirements specified in the Contract.

1.8.3 Quality Control System

Establish and maintain an effective quality control (QC) system in compliance with Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION. The quality control system shall consist of plans, procedures, and organization necessary

to produce an end product which complies with the Contract requirements and cover all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence.

1.8.4 Contractor Quality Control Plan

Submit no later than 14 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started.

1.8.5 Content of the CQC Plan

Include, as a minimum, the following to cover all construction operations, both onsite and offsite, including work by subcontractors, fabricators, suppliers, and purchasing agents:

- a. A description of the quality control organization, including an organization chart and assigned functions.
- b. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and authorities to adequately perform the functions of the CQC System Manager.
- c. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents.
- d. Procedures for 3-phase quality control inspections and control, verification, and acceptance tests including documentation.
- f. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may be work by the same trade in a different environment.

1.8.6 Acceptance of CQC Plan

Acceptance of the CQC plan is required prior to the start of construction.

1.8.7 Notification of Changes

After acceptance of the CQC Plan, notify the CO in writing of any proposed change. Proposed changes are subject to acceptance by the CO.

1.8.8 CQC Coordination Meeting

Before construction begins meet with the CO and discuss the Contractor's quality control system. Submit the CQC Plan for review a minimum of five calendar days prior to the CQC Coordination Meeting.

1.8.9 CQC Personnel Requirements

The requirements for the CQC organization are a CQC System Manager and sufficient number of additional qualified personnel to ensure Contract

compliance. The Contractor's CQC staff shall maintain a presence at the site at all times during progress of the work and have complete authority and responsibility to take any action necessary to ensure Contract compliance.

1.8.9.1 CQC System Manager Qualifications

Identify an individual, within the onsite work organization, as CQC System Manager who shall be responsible for writing and executing a complete CQC plan, overall management of CQC, and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer with a minimum of five years experience in a verifiable CQC role on jobs similar to this Contract. This CQC System Manager shall be on the site at all times during construction and be employed by the prime Contractor. The CQC System Manager can be the SSHO on this project. Identify in the plan an alternate for the CQC System Manager, to serve in the event of the CQC System Manager's absence and/or to cover work performed on additional shifts, whose requirements are the same as the designated CQC System Manager.

1.8.9.2 CQC Specialized Personnel

In addition to CQC personnel specified elsewhere in the Contract, provide as part of the CQC organization specialized personnel to assist the CQC System Manager for the following areas: structural, if the CQC manager is not qualified to cover these areas. These individuals shall be directly employed by the prime Contractor and may not be employed by a supplier or subcontractor on this project; shall be responsible to the CQC System Manager; be physically present at the construction site during work on their areas of responsibility; and meet the same experience/education qualifications in their own discipline as for the CQC Manager. A single person may cover more than one area provided that they are qualified to perform QC activities in each designated and that workload allows.

1.8.10 Construction Quality Management for Contractors

In addition to the above experience and/or education requirements, the CQC System Manager and Alternate CQC System Manager shall have successfully completed the course entitled "Construction Quality Management For Contractors." This course is periodically offered by the Associated Builders and Constructors, Inc., or Associated General Contractor, Inc. and shall be retaken every five years. The course has been coordinated with the Navy and certificates from the Navy will be accepted. For further information regarding courses in the Portland area contact: Associated General Contractors, Oregon-Columbia Chapter at (503) 682-3363 or <http://www.agc-oregon.org/education-and-training/army-corps-of-engineers/>.

1.8.11 Quality Control Phases

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. Conduct at least three phases of control by the CQC System Manager:

- a. Preparatory Phase - Perform prior to beginning work on each definable feature of work, after all required plans/documents/materials are approved/accepted, and after copies are at the work site. Notify Government at least 24 hours in advance of beginning the preparatory phase meeting.

Includes review of Contract documents; assure materials and/or equipment have been tested, submitted, and approved; physical examination of materials, equipment, and sample work to assure they conform to Contract requirements and are properly stored.

b. Initial Phase - This phase shall be accomplished at the beginning of each definable feature of work when construction crews are ready to start work. Notify Government at least 24 hours in advance of beginning the initial phase.

Includes check of work to ensure it is in full compliance with Contract requirements; verify adequacy of controls, control inspection, and testing.

c. Follow-up Phase - Perform daily checks to ensure control activities, including control testing, are providing continued compliance with Contract requirements, until completion of the particular feature of work. Record the daily checks in the CQC documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of work which may be affected by the deficient work. Do not build upon nor conceal non-conforming work.

1.8.12 Tests

a. Laboratory Validation - For tests performed under this Contract, use a testing laboratory validated by the Corps of Engineers Material Testing Center (MTC).

b. Perform specified or required tests to verify that control measures are adequate to provide a product that conforms to Contract requirements. Report all test results using industry standard forms at the frequency specified in the Contract. Procure the services of a Corps of Engineers approved testing laboratory, as described in subparagraph entitled Testing Laboratories, or establish an approved testing laboratory at the project site.

1.8.12.1 Testing Laboratories

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the Contract specifications and to check the laboratory technician's testing procedures and techniques.

a. Validation. The validation of a testing laboratory is site-specific and cannot be transferred to a facility at a different location. Costs for validation by the Corps of Engineers MTC shall be borne by the laboratory and/or the Contractor. Validation is granted only for the specific testing procedures requested to be validated. The laboratory may select the testing procedures to be validated, except for the Quality Assurance requirements of the applicable ASTM standards listed in this paragraph.

b. Validation Procedures. Validation of a testing laboratory consists of either an inspection or audit, as defined below:

(1) Inspection shall be performed by the MTC to verify compliance with the applicable provisions of ASTM C1077, ASTM C1093, ASTM D3666, ASTM D3740, and ASTM E329.

(2) An audit would be performed by the MTC in lieu of an inspection for laboratories holding a current AASHTO accreditation. Inspection by the MTC may be required after auditing if critical testing procedures required in the Contract were not included in the applicable CCRL or AMRL inspections.

c. Validation Schedule. For aggregate, concrete, bituminous materials, soil, rock, riprap, and metal components, the frequency of validation inspections or audits is once every two years. For water quality and sediment testing the validation schedule is every 18 months. When conditions change substantially from the time of the last validation, laboratories shall be re-validated.

d. Validation Process. For information on the validation process and costs contact the MTC at (601) 634-2496 or fax at (601) 634-3242. Procedures for validation, including forms requesting validation may be obtained from the MTC web site at <http://gsl.erd.c.usace.army.mil/SL/MTC/>. The Contractor is cautioned that the validation process is lengthy and that it requires immediate action. Keep the CO informed about the validation process as it proceeds in a timely manner.

1.8.12.2 Onsite Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests, and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

1.8.12.3 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials shall be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Portland District contract commercial Laboratory in the District area. Coordination for each specific test, exact delivery location, and dates shall be made through the Portland District Resident Office.

1.8.13 Completion Inspections

a. Punch-Out Inspection - Conduct an inspection of the work near the end of the work. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished. Submit punch list including deficiencies and how they were corrected. Notify the Government, within three working days, that the facility is ready for the Government Pre-Final inspection.

b. Government Pre-Final Inspection - The Government will perform the pre-final inspection to verify that the work is complete. A Government Pre-Final Punch List may be developed as a result of this inspection, submit pre-final punch list including deficiencies and how they were corrected. Correct any items noted on the Pre-Final inspection within the time slated for completion of the entire work or any particular increment of the work if the project is divided into increments by separate completion

dates. The Contractor's CQC System Manager shall ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled.

c. Final Acceptance Inspection - The final acceptance inspection will be formally scheduled by the Contractor based upon results of the Pre-Final inspection. Notify the CO at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the CO shall be in attendance at the final acceptance inspection. Failure of the Contractor to have all Contract work acceptably complete for this inspection will be cause for the CO to bill the Contractor for the Government's additional inspection cost in accordance with Contract Clause 52.246-12, INSPECTION OF CONSTRUCTION.

1.8.14 Documentation

Daily CQC Report - Maintain current records providing factual evidence that required quality control activities and/or tests have been performed. Electronically submit daily reports and a signed, printed copy of these records to the Government within 24 hours after the date covered by the report. As a minimum, prepare and submit one report for every seven days of no work and on the last day of a no work period.

1.9 QUALITY CONTROL SYSTEM (QCS)

Use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the Contract period. The Contractor module, user manuals, updates, and training information can be downloaded from the Government's Resident Management System (RMS) web site at <http://rmssupport.helpserve.com/>. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the Contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government. Contractor use of QCS as described in the following paragraphs is mandatory:

1.9.1 QCS Software

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install, and use the latest version of the QCS software from the Government's RMS Internet Website.

1.9.2 System Requirements

The following is the minimum configuration that the Contractor shall have to run QCS:

a. Hardware

- (1) IBM-compatible PC with 1000 MHz Pentium or higher processor

- (2) 256+ MB RAM for workstation / 512+ MB RAM for server
- (3) 1 GB hard drive disk space for sole use by the QCS system
- (4) Compact Disk (CD) Reader (CD-R, 8x speed or higher)
- (5) Color monitor (1024x768, 256 colors)
- (6) Mouse or other pointing device
- (7) Windows compatible printer (Laser printer must have 4 MB+ of RAM)
- (8) Connection to the Internet (Minimum 56k BPS).

b. Software

- (1) MS Windows 2000 or higher
- (2) Word Processing software: MS Word 2000 or newer
- (3) Latest version of: Netscape Navigator, Microsoft Internet Explorer, or other browser that supports HTML 4.0 or higher
- (4) Virus protection software that is regularly upgraded with all issued manufacturer's updates
- (5) Electronic mail (E-mail) compatible with MS Outlook.

1.9.3 Quality Control System (QCS) Training

The use of QCS will be briefly discussed with the Contractor's QC System Manager during the mandatory CQM Training course. The QCS training course is periodically offered through the Associated General Contractors (AGC). For further information regarding courses in the Portland, Oregon area, contact: Associated General Contractors, Oregon-Columbia Chapter at (503) 682-3363 or <http://www.agc-oregon.org/education-and-training/army-corps-of-engineers/>.

1.9.4 Database Maintenance

a. Establish, maintain, and update data in the QCS database throughout the duration of the Contract at the Contractor's site office. Submit data updates to the Government (e.g., daily reports, submittals, RFI's, schedule updates, payment requests, etc.) using the Government's SFTP repository built into QCS export function. If permitted by the CO, email or CD-R discs may be used. The QCS database typically shall include current data on the following items, at a minimum:

Administration, finances, Quality Control, submittal management, schedule, and import/export of data.

b. The Government-preferred method for Contractor's submission of QCS data is by using the Government's SFTP repository built into QCS export function.

1.10 ENVIRONMENTAL PROTECTION

a. Environmental Protection covers preventing environmental pollution and minimizing environmental degradation during and as a result of construction operations. The control of environmental pollution requires consideration of sound levels, air, water, and land resources.

b. Minimize environmental pollution and damage that may occur as the result of construction operations. Protect the environmental resources within the project boundaries and those affected outside the limits of permanent work during the entire duration of this Contract. Comply with all applicable environmental Federal, State, and local laws and regulations. Any delays resulting from failure to comply with environmental laws and regulations shall be the Contractor's responsibility.

1.10.1 Environmental Protection Plan

Prior to commencing construction activities or delivery of materials to the site, submit an Environmental Protection Plan for review and approval by the CO. Address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Identify and discuss topics or issues which are not identified in this Section, but which the Contractor considers necessary. The Environmental Protection Plan shall be current and maintained on site by the Contractor. The Environmental Protection Plan shall include, but not be limited to, the following:

a. Name and phone number of individual(s) within the Contractor's organization responsible for ensuring adherence to the Environmental Protection Plan; name, number, and qualifications of individual responsible for training the Contractor's environmental protection personnel; and a description of Contractor's environmental protection personnel training program.

b. An [Erosion and Sediment Control Plan for the State of Oregon](#) and shall be prepared by the Contractor. Update or modify this plan as necessary to identify the type and location of the erosion and sediment controls to be provided. Implement the [erosion and sediment control measures to prevent sediment from entering streams or water bodies in conformance with the requirements of the National Pollution Discharge Elimination System \(NPDES\) permit](#).

c. Include in the Spill Control Plan the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by [40 CFR 68](#), [40 CFR 112](#), [40 CFR 302](#), [40 CFR 355](#), and/or regulated under State or Local laws and regulations. The Spill Control Plan supplements the requirements of [EM 385-1-1](#).

(1) Include the 24-hour spill notification telephone numbers including NRC, County, and local police and/or Emergency Response organization as appropriate and required. The plan shall include 24-hour emergency number for the Government Quality Assurance Representative (GQAR), CO, and Small Projects Team POC. For Washington, the Washington Emergency Management Division, appropriate Department of Ecology regional office at website <http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm>. The Central Region for Skamania County shall also be notified.

(2) Include a hazardous material Spill Emergency Initial Report Form, similar to Attachment A4. Ensure that all of the elements shown on the sample form are provided and submitted within 24 hours of a spill.

d. Include a non-hazardous solid waste disposal plan; air pollution control plan; contaminant prevention plan; wastewater management plan; historical, archaeological, cultural resources biological resources and wetlands plan.

e. Include an appendix with copies of all environmental permits, permit application packages, approvals to construct, notification, and certifications.

1.10.2 Notification

The CO will notify the Contractor in writing of any observed noncompliance with Federal, State, or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection Plan. The CO may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the CO may take under the Contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.10.3 Environmental Permits and Commitments

a. Obtain all permits and licenses required for this project as stated in Section 00700 Contract Clause 52.236-7, PERMITS AND RESPONSIBILITIES. These may include inter-agency coordination agreements and subsequent compliance requirements. Comply with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.

b. National Pollution Discharge Elimination System (NPDES) Permit Associated with Construction Activities - The Government will obtain a NPDES permit for storm water discharges associated with construction activities, issued by the Oregon Department of Environmental Quality or for this Contract. Comply with general NPDES permit language for construction activities.

1.10.4 Land Resources

Confine all activities to areas defined by the Drawings and Specifications. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without approval, except in areas indicated on the Drawings or specified to be cleared.

a. Work Area Limits - Mark or fence isolated areas within the general work area which are not to be disturbed.

b. Landscape - Clearly identify by marking, fencing, or any other approved technique, trees, shrubs, vines, grasses, landforms, and other landscape features indicated on the Drawings and defined to be preserved. Restore landscape features damaged or destroyed during construction operations outside the limits of approved work area.

c. Erosion and Sediment Controls - Provide erosion and sediment control measures in accordance with Federal, State, and local laws and regulations. The area of bare soil exposed at any one time by construction operations shall be kept to a minimum. Construct or install temporary and permanent erosion and sediment control best management practices (BMPs). BMPs may include, but not be limited to, vegetation cover, stream bank stabilization, slope stabilization, silt fences, construction of terraces, interceptor channels, sediment traps, inlet and outfall protection, diversion channels, and sedimentation basins. The Contractor's BMPs shall also be in accordance with [the National Pollutant Discharge Elimination System \(NPDES\)](#), [Erosion and Sediment Control Plan \(ESCP\)](#) or. Remove any temporary measures after the area has been stabilized. Submit the [ESCP](#) and for each phase indicated below:

Phase 1: Initial Perimeter Controls; Phase 2: Sediment and Erosion Controls During Construction; and Phase 3: Final Site Stabilization.

d. Minimum Monitoring and Reporting - As part of the Contractor's Daily CQC Report, prepare and submit [Inspection Reports](#) to the CO within 24 hours of the inspection. Keep record of inspections.

1.10.5 Water Resources

Monitor all water areas affected by construction activities to prevent pollution of surface and ground water. Do not apply toxic or hazardous chemicals to soil or vegetation unless otherwise indicated. No water courses shall be polluted by or have existing pollution contributed to with any petroleum products, fuels, oils, lubricants, bitumen, sandblast grit, paint chips, calcium chloride, insecticides, herbicides, or other toxic materials harmful to life. Chemical emulsifiers, dispersants, coagulants, or other cleanup compounds shall not be used without prior written approval. Compliance with State water quality standards and conditions of any permits and clearances obtained for the work shall be the Contractor's responsibility.

c. Erosion Control - Hold surface drainage from cuts and fills, whether or not completed, and from borrow and material deposit areas in sedimentation ponds or grade the areas to control erosion within acceptable limits. Provide and maintain temporary erosion and sediment control measures such as seeding, mulching, ditches, dikes, drains, sedimentation basins, or silt fences or curtains. Hold the area of bare soil exposed at any time by construction to a minimum.

e. Washing and Curing Water - Do not allow water used in embankment material processing, aggregate processing, concrete curing, foundation and concrete cleanup, equipment washing, and other waters to enter any water course without prior treatment and without approval.

f. Excess Material Deposits - Do not allow deposit of any materials, effluents, trash, garbage, oil, grease, chemicals, or other contaminants in areas adjacent to streams. If any unwanted material is dumped in unauthorized areas, remove the material and restore the area to a condition approximating the adjacent undisturbed area. Excavate, remove, and restore the contaminated ground area as directed.

1.10.6 [Invasive Species Prevention Measures for Boat Operations](#)

Prevent contaminating Columbia River with invasive species, particularly zebra mussels. Zebra mussels can be transported by boats, trailers, outboard motors and other equipment such as tractors, bulldozers, water pumps, ropes and nets that are used in areas that zebra mussels inhabit. Zebra mussels have been found in several lakes and river systems. If equipment is not properly inspected and treated to prevent the spread of zebra mussels and other aquatic nuisance species, they can be introduced into areas not currently infested. To assist in preventing the introduction and spread of aquatic nuisance species, the following precautions shall be taken:

- a. Prior to transporting to site, visually inspect all equipment for zebra mussels and other aquatic nuisance species. Remove all trash, mud, vegetation, and suspected zebra mussels, place in plastic bags, and properly dispose of in land-based receptacles.
- b. All construction equipment and supplies intended for use in WA waters that has been exposed to other lake or stream water shall be thoroughly washed with a power washer or be allowed to dry an appropriate length of time. Water being used for power washing shall be at least 160 degrees F when leaving the spray nozzle and 140 degrees F when contacting the equipment being decontaminated. All contaminated runoff shall be adequately contained and disposed of properly. The appropriate length of drying time is dependant upon weather conditions when the equipment is drying. Use the following link to determine the number of drying days required for drying before work can begin 12/01/2014: <http://www.100thmeridian.org/emersion.asp>.
- c. Treat pumps, equipment, and supplies that cannot be thoroughly drained, cleaned, and dried with a 200 ppm bleach solution for 20 minutes, deactivate with sodium thiosulfate, and rinse according to Table 1 below.
- d. Conduct an onsite inspection of all vessels, equipment, pumps, and supplies to be used in or around the water before work begins. Coordinate the date and time of this onsite inspection with the CO seven days in advance of inspection.
- e. Inspect vessels and equipment upon removal from any body of water. Clean hulls, anchors, moorings, trailers, etc. of all mud, vegetation, and any noticeable attached zebra mussels before leaving the site. Remove any suspected zebra mussels, report to the CO, and contain them for verification.
- f. Wash or appropriately dry all vessels and construction equipment removed from WA waters currently infested with zebra mussels or other aquatic invasive species as described above.

Table 1:

Disinfectant Amounts to Make Needed Concentrations					
Disinfectant	1 gallon	2 gallons	5 gallons	20 gallons	100 gallons

Disinfectant Amounts to Make Needed Concentrations					
200 ppm Chlorine (household bleach, 5.25% Chlorine)	0.5 ounce (15 ml)	1.0 ounce (30 ml)	2.5 ounces (75 ml)	11.0 ounces (300 ml)	6 1/3 cups (1.5 L)
800 ppm Sodium Thiosulfate	0.1 ounce (3 g)	0.2 ounce (6 g)	0.5 ounce (15 g)	2.1 ounces (60 g)	10.6 ounces (300 g)

Notes:

- (1) Zebra mussel juveniles, called veligers are microscopic and invisible to the naked eye.
- (2) Air drying and hot water are most effective when used in conjunction with each other because their effectiveness is highly dependent upon ambient temperatures and contact times.
- (3) Household bleach (5.25 percent chlorine) and vinegar can be purchased from grocery or convenience stores. Sodium Thiosulfate can be purchased at pool supply stores or chemical companies.
- (4) All bilges and hidden areas under boat decks shall be thoroughly treated as described above.
- (5) For instructions on cleaning and decontaminating specific types of equipment use the following link to access the Inspection and Cleaning Manual for Equipment and Vehicles to Prevent the Spread of Invasive Species: <http://www.usbr.gov/mussels/prevention/docs/EquipmentInspectionandCleaningManual2010.pdf>

1.10.7 Air Resources

Equipment operation, activities, or processes performed shall be in accordance with all Federal and State air emission and performance laws and standards.

- a. Particulates - Control dust particles; aerosols and gaseous by-products from construction activities; and processing and preparation of materials at all times, including weekends, holidays, and hours when work is not in progress.
- b. Odors - Control odors from construction activities at all times. The odors shall be in compliance with State regulations and/or local ordinances and shall not constitute a health hazard.
- c. Sound Intrusions - Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Washington rules.
- d. Burning - Burning is prohibited on the Government premises.

1.10.8 Chemical Materials Management and Waste Disposal

- a. Solid Wastes - Provide waste receptacles. Place solid wastes (excluding clearing debris) in Contractor-provided containers which are emptied or removed from the job site on a regular schedule. Comply with Federal, State, and local laws and regulations pertaining to the use of landfill areas.
- b. Chemicals and Chemical Wastes - Classify, manage, store, and dispose of wastes in accordance with Federal, State, and local laws and regulations.
- c. Contractor Generated Hazardous Wastes and Excess Hazardous Materials - Manage, store, describe, package, label, mark, and placard hazardous waste and hazardous material in accordance with 40 CFR 260, 40 CFR 262, 40 CFR 264, 49 CFR 171-178, State, and local laws and regulations.
- d. Disposal of Hazardous Waste - Remove all Contractor hazardous wastes from the project for proper disposal within 90 days of waste generation or at the completion of on-site work. Package, label, and mark all hazardous waste in accordance with 49 CFR 172 and 40 CFR 262. Store all hazardous waste in accordance with 40 CFR 264. Transportation of Contractor hazardous material shall be in accordance with 49 CFR 171-178. Use the Contractors Environmental Protection Agency (EPA) identification number to dispose of all hazardous waste generated by the Contractor and its subcontractors under this Contract.
- e. Fuel and Lubricants - Manage and store used lubricants and used oil to be discarded in marked, corrosion-resistant containers and recycle or dispose of in accordance with 40 CFR 279, State, and local laws and regulations.
- f. Wastewater - Do not allow wastewater from construction activities (such as on-site material processing, concrete curing, foundation and concrete clean up, water used in concrete trucks, forms, etc.) to enter water ways or to be discharged prior to being treated to remove pollutants.

1.10.9 Historical, Archaeological, and Cultural Resources

Existing historical, archaeological, and cultural resources within the Contractor's work area are shown on the Drawings. Protect and preserve these resources during the life of the Contract. If, during excavation or other construction activities, any previously unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, temporarily suspend all activities that may damage or alter such resources. Upon such discovery or find, immediately notify the CO so that the appropriate authorities may be notified and a determination made as to their significance and what, if any, special disposition of the finds should be made. Cease all activities that may result in impact to or the destruction of these resources. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources.

1.10.10 Biological Resources

Minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. Protect threatened and endangered animal and

plant species, including their habitat, in accordance with Federal, State, Regional, and local laws and regulations.

1.10.11 Previously Used Equipment

Clean all previously used construction equipment prior to bringing it onto the project site. Ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the USDA jurisdictional office for additional cleaning requirements.

1.10.12 Training of Personnel

Train all Contractor personnel in all phases of environmental protection and pollution control. Conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when site conditions change.

1.10.13 Post Construction Cleanup

Clean up all areas used for construction in accordance with Contract Clause 52.236-12, CLEANING UP. Unless otherwise instructed in writing by the CO, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. Grade, fill, and seed entire disturbed area, unless otherwise indicated.

1.11 PROJECT RECORD DOCUMENTS

This Section covers record drawings complete, as a requirement of the Contract. Record drawings are those which are revised by the Contractor to be used for preliminary and final record drawings submittals showing as-built conditions. Record drawings showing final as-built conditions of the work are defined, but not limited to:

- a. Contract Drawings - Drawings created specifically for this Contract and provided to the Contractor upon Award. As-built drawings are copies of Contract drawings that are revised to show additions and changes occurring during construction, eventually becoming final record drawings.
- b. Contractor and Shop Drawings - Drawings shall include diagrammatic and design information provided by the Contractor and the Contractor's subcontractors, vendors, or suppliers which meet requirements of and provide additional details of the work required by the Contract.
- c. Reference Drawings - Drawings provided to the Contractor upon Award for reference. Reference drawings are listed on the Reference Drawing Index sheet.
- d. Designated Reference Drawings - Project maintained drawings designated to be verified and revised by the Contractor to show final as-built conditions as part of this Contract. Designated Reference Drawings are listed on the Reference Drawing Index with Action Key.

1.11.1 Record Drawings Execution Plan

Submit for approval a discussion detailing how the Contract requirements for Record Drawings. Identify Contractor personnel who shall be responsible for maintaining marked up as-built conditions during the prosecution of the work and identify an authorized Contractor representative who will certify the monthly review in conjunction with periodic progress payments. Identify Contractor personnel who shall be responsible for meeting the the Preliminary Record Drawing submittal requirements at the time of Final Inspection(s), the Final Record Drawings submittal requirements, and describe the process of how these requirements will be met. Include the name and contact information of service providers to the Record Drawings execution process if the requirements will be partially fulfilled by outside firms. The monthly Contractor-certified working as-built drawings will be signed by the CO and the authorized representative of the Contractor and shall then be attached to the periodic progress payment request.

1.11.2 Working As-Built Drawings

a. During the execution of the work, mark up one full-size paper set of Contract, Reference, Designated Reference, and Contractor and Shop Drawings in accordance with this Section and Section 01 33 00, SUBMITTAL PROCEDURES, subparagraph entitled Drawings, to show the current as-constructed conditions. Keep working as-built drawings current on a continuous basis and available on the job site at all times by accurately and neatly record changes as they occur. Mark up the hard copy of the working as-built drawings, including details and notes, in accordance with the Project's hard copy as-built standards.

b. Working as-built drawings are part of the permanent records of this Contract and will be retained by the Government upon approval. Record drawings shall include, but not be limited to:

(1) Contract Drawings - Use working as-built Contract drawings to revise the Government-provided Computer-Aided Design (CAD) Contract Drawings.

(2) Contractor and Shop Drawings - Incorporate working as-built Contractor and Shop Drawing field conditions into the Final Record Drawing Package to ensure the ability to cross-reference between Contract, Reference, Designated Reference, and Shop Drawings.

(3) Designated Reference Drawings - Use working as-built Designated Reference Drawings to create new or revise Government-provided CAD drawings to show as-constructed revisions.

1.11.3 CAD Standards

a. The CAD standards mandated by US Army Corps of Engineers (USACE) and this Contract is ERDC/ITL TR-09-2. ERDC/ITL TR-09-2 is available, under the District CADD Standards, at the following web link: <http://www.nwp.usace.army.mil/About/Standards.aspx>. The web link contains the guides, libraries, and templates that shall be utilized by the Contractor to produce CAD files that are compliant with the CAD standards required in this Contract.

b. Computer-Aided Design (CAD) work for this Contract shall be accomplished with personnel that are knowledgeable and experienced with

ERDC/ITL TR-09-2. Employ proficient personnel for the creation of CAD files.

c. Additions and corrections to the Contract and designated reference drawings shall be equal in quality and detail to that of the original drawings. Format, line colors, line weights, line types, lettering, level names, symbols, sheet space, title block, and drawing border shall be the same as that used on the original Contract and designated reference drawings. The folder structure, CAD file names, and reference file system shall remain the same as the original drawing structure, system, and file naming convention.

1.11.4 Final Record Drawings

Allow a minimum of 30 calendar days, exclusive of mailing time, for Government review and approval. The CO will review final record drawings for accuracy and completeness and return them to the Contractor for required corrections, changes, additions, and deletions. If revisions are required, make such revisions within 30 calendar days, and re-submit to the Government for review and approval. Paper prints, electronic CAD, and PDF files of the final record drawings and shop drawings submitted will become the property of the Government upon final approval.

1.11.4.1 Paper Copies

Thirty calendar days from acceptance of the preliminary record drawings, submit two complete full-size sets and three complete 1/2-size sets of all final record drawings, in accordance with this Section and Section 01 33 00, SUBMITTAL PROCEDURES, subparagraph Drawings. Amend discrepancies noted during the review and re-submit two complete full-size sets and three complete 1/2-size sets to the Government for review and approval.

1.11.4.2 Electronic Copies

a. Submit final record drawing files in the same format as originally provided by the Government. Electronic copies of existing Contract drawings contained in this Contract and Designated reference drawings will be made available to the Contractor. Use working as-built drawings to revise Government-provided electronic drawings to show as-constructed revisions. Thirty calendar days from acceptance of the preliminary electronic CAD record drawings, submit a complete set of final electronic CAD files on permanently labeled CD-ROM, CD-R discs only. Final record drawings shall be in accordance with paragraph CAD Standards. A list of firms capable of performing this work is available on the ACEC of Oregon website at http://www.acecoregon.org/documents/list_of_AutoCad-Microstation_firms.pdf. Publish final approved record drawings and shop drawings to Adobe PDF and include in the final record drawing package on CD-R with data organized identically to the complete hard copy package.

b. Drafting Standards

(1) General Drafting Standards. The drafting standards used in the provided CAD electronic files shall be in accordance with paragraph CAD Standards. The Government will furnish the cell and font libraries and the standard border for use in preparing the drawings.

(2) As-Built Drafting Standards:

(a) A record of revisions shall remain in the title block; revision triangles are to be removed from the rest of the drawings.

(b) Add the final revision notation to the title block of "Record Drawings/As-Built Conditions" or "Revised Record Drawings/As-Built Conditions."

(c) Add as-built block to all drawings with information complete. A sample will be provided.

1.11.5 Payment Basis for Project Record Documents

1.11.5.1 Monthly Pay Estimate

As-built marked prints and electronic CAD files will be jointly inspected for accuracy and completeness by the CO and an authorized representative of the Contractor prior to submission of the monthly pay estimate. Failure to keep working as-built drawings maintained on a current basis will be sufficient justification to withhold a percentage of the monthly pay estimate in an amount representing the estimated cost of completing the preliminary record drawings. Approval and acceptance of final record drawings will be accomplished before final payment is made to the Contractor. Moreover, failure to provide complete final record drawings and approved working as-built drawings required in accordance with this Section will result in a final unsatisfactory overall performance rating, despite the nature of all other ratings.

1.11.5.2 Payment

No separate payment will be made for compliance with this Section. All costs associated with the requirements of this Section are considered incidental to the work.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES
11/2012

PART 1 GENERAL

1.1 GENERAL INFORMATION

a. Section 00700 Contract Clauses 52.236-5, MATERIAL AND WORKMANSHIP, paragraph (b) and 252.236-7001, CONTRACT DRAWINGS AND SPECIFICATIONS, apply to all submittals.

b. Make submittals as required by the Specifications. The Contracting Officer (CO) may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective Sections.

c. Use the same units of weights and measures on all submittals as those used in the Contract Drawings.

d. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with Contract requirements.

e. The Contractor's Quality Control (CQC) System Manager and the Designer of Record (DOR) shall check and approve all items prior to submittal and stamp, sign, and date indicating action taken. Proposed deviations from the Contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

f. Submittals requiring Government approval shall be scheduled and approved prior to the acquisition of the material or equipment covered thereby.

g. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

h. Submittals requiring professional licensure, signature, and stamp shall comply with all State professional licensing and registration requirements.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with this Section:

SD-01 Preconstruction Submittals

Submittal Register; G

SD-07 Certificates

Authorized Shop Drawing Approvers

1.3 DEFINITIONS

1.3.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical Sections and in the preliminary submittal register (ENG Form 4288-R, Attachment A1). Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

Submittals required prior to start of construction work. Includes, but not limited to: schedules, tabular list of data, or tabular list including location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

Certificates of insurance.

Surety bonds.

List of proposed subcontractors.

List of proposed products.

Construction Progress Schedule.

Submittal register.

Schedule of prices.

Health and safety plans.

Work plan.

Contractor Quality Control (CQC) plan.

Environmental protection plan.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance, and other characteristics of materials, systems, or equipment for some portion of the work.

Warranty language when the Contract requires extended product warranties.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product, or system identical to the material, product, or system to be provided has been tested in accordance with specified requirements. (Testing shall have been within three years of date of Contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports.

Daily logs and checklists.

Final acceptance test and operational test procedure.

Any reports required by the CO or designated representative to assure successful completion of tasks during the life of the Contract.

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system, or material attesting that product, system, or material meets specification requirements. Shall be dated after award of project Contract and clearly name the project.

Document required of Contractor, or of a manufacturer, supplier, installer, or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

Text of posted operating instructions.

SD-11 Closeout Submittals

Documentation to record compliance with technical or administrative requirements or to establish an administrative mechanism.

Special requirements necessary to properly close out a construction Contract. For example, Record Drawings and as-built drawings.

1.3.2 Approving Authority

Office or designated person authorized to approve submittal.

1.3.3 Work

As used in this Section, on- and off-site construction required by Contract documents, including labor necessary to produce submittals (except those SD-01 Pre-Construction Submittals noted above) construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.4 SUBMITTAL DESIGNATION

Submittals are classified as follows:

a. Government Approved (G). Government approval is required for critical materials, deviations, an "or equal" decision, equipment whose compatibility with the entire system must be checked, and other items as designated by the CO. Government approval is required for any variations or deviations from the Solicitation or Accepted Proposal and other items as designated by the CO. Within the terms of Section 00700 Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings."

b. Information Only. Submittals not requiring Government or DOR approval will be for information only. Within the terms of the Section 00700, Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, these submittals are not considered to be "shop drawings."

c. Designer of Record Approved (D). Designer of Record (DOR) approval is required for extensions of design, critical materials, any deviations from the Solicitation, the Accepted Proposal, or the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the CO. Within the terms of the Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings." Provide the Government with the number of copies designated hereinafter of all DOR approved submittals. The Government may review any or all DOR approved submittals for conformance to the Solicitation, Accepted Proposal, and the completed design. The Government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described in subitem "a" above. Design submittals shall be in accordance with Section 01 33 16.00 25 DESIGN BUILD: DESIGN AFTER AWARD. Generally, design submittals should be identified as SD-05 Design Data. The DOR is not authorized to approve variations or deviations from the Contract requirements.

d. Government Conformance Review of Design (C). The Government will review all intermediate and final design submittals for conformance with the technical requirements of the Solicitation and Accepted Proposal. Review will be only for conformance with the applicable codes, standards, and Contract requirements. Generally, design submittals should be identified as SD-05 Design Data submittals.

e. Designer of Record Approved and Government Conformance Review (R)

(1) Deviations to the Accepted Design. DOR approval and the Government's concurrence are required for a proposed variation or deviation from the accepted design which still complies with the Contract terms, the Solicitation and the Accepted Proposal, before the Contractor is authorized to proceed with material acquisition or installation. Within the terms of the Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are considered to be "shop drawings." If necessary to facilitate the project schedule, the Contractor and the DOR may discuss a submittal proposing a deviation with the CO prior to officially submitting it to the Government. However, the Government reserves the right to review the submittal before providing an opinion, if deemed necessary. In any case, the Government will not formally agree to or provide a preliminary opinion on any deviation without the DOR's approval or recommended approval. The Government reserves the right to non-concur with any deviation from the design, which may impact

furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and concurred design.

(2) Substitutions. Unless prohibited or provided for otherwise elsewhere in the Contract, where the Accepted Proposal named products, systems, materials or equipment by manufacturer, brand name and/or by model number or other specific identification, and the Contractor desires to substitute manufacturer or model after award, submit a requested substitution for Government concurrence. Include substantiation, identifying information and the DOR's approval, as meeting the Contract requirements and that it is equal in function, performance, quality and salient features to that in the Accepted Proposal. If the Contract otherwise prohibits substitutions of equal named products, systems, materials or equipment by manufacturer, brand name and/or by model number or other specific identification, the request is considered a "variation" to the Contract. Variations are discussed below in: Designer of Record Approved and Government Approved (subitem f), and subparagraph Variations.

f. Designer of Record Approved and Government Approved (A). For proposed variations or deviations which constitute a change to the Contract terms: DOR, Government Approval, and a Contract modification are required before the Contractor is authorized to proceed with material acquisition or installation; re-classify submittal with an "A". Within the terms of Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION they are considered to be "shop drawings." The Government reserves the right to accept or reject any such proposed deviation at its discretion.

1.5 SUBMITTAL REGISTER

1.5.1 Maintain Submittal Register

a. Prepare and maintain Submittal Register, ENG Form 4288-R, per subparagraph entitled Submittal Management, in Section 01 33 00, QUALITY CONTROL SYSTEM (QCS), as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. This list may not be all inclusive and additional submittals may be required. Do not preassign transmittal numbers when preparing the submittal register. The preliminary and then the approved submittal register will become the scheduling documents and will be updated monthly and used to control submittals throughout the life of the Contract.

b. The Government will provide the preliminary submittal register in electronic format

(1) Column (c): Lists Specification Section in which submittal is required.

(2) Column (d): Lists each submittal description (SD No. and type, e.g. SD-02 Shop Drawings) required in each Specification Section.

(3) Column (e): Lists one principal paragraph in Specification Section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.

c. Thereafter, track all submittals by maintaining a complete list, including completion of all data columns, including dates on which submittals are received and returned by the Government.

d. The DOR shall develop a complete list of submittals during design and identify required submittals in the specifications, and use the list to prepare the Submittal Register. The list may not be all inclusive and additional submittals may be required by other parts of the Contract. Complete the submittal register and submit it to the CO for approval within 30 calendar days after Notice to Proceed. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the Contract period. Coordinate the submit dates and need dates with dates in the Contractor prepared progress schedule. Submit monthly or until all submittals have been satisfactorily completed, updates to the submittal register showing the Contractor action codes and actual dates with Government action codes. Revise the submittal register when the progress schedule is revised and submit both for approval.

1.5.2 Use of Submittal Register

Submit submittal register with project schedule and QC plan. Verify that all submittals required for work are listed and add missing submittals. Coordinate, update, and complete the fields on the submitted register in QCS with the project schedule and QC plan.

1.5.3 Government Approval Submittals

1.5.3.1 Quantity of Submittals

SD-01, SD-02, SD-03, and SD-05 through SD-11 submittals: Upload submittals with corresponding ENG 4025-R transmittal forms (Attachment A2) as outlined in paragraph entitled e-Submittals. SD-04 submittals: Submit two samples of "G" submittals with two corresponding ENG 4025-R transmittal forms, unless otherwise specified. Upon completion of review, "G" submittal copies will be marked with an action code, dated, electronically signed, and electronically returned to the Contractor as specified below:

1.5.3.2 Processing of "G" Submittals.

a. Submittals will be reviewed and processed as follows:

(1) Approved as Submitted (Action Code "A"): Submittals which can be approved without correction will be stamped "Approved" and returned electronically to the Contractor.

(2) Approved, Except as Noted on Drawings (Action Code "B"): Submittals which have only minor discrepancies will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted" and returned electronically to the Contractor for correction.

(3) Approved, Except as Noted on Drawings, Resubmission Required (Action Code "C"): Submittals which are incomplete or require more than minor corrections will be annotated in red to indicate necessary corrections. Marked material will be stamped "Approved Except as Noted - Resubmission Required" and returned electronically to the

Contractor for correction. Resubmittal of only those items needing correction required.

(4) Will be Returned by Separate Correspondence (Action Code "D"): Submittals will be addressed by Serial Letter and the Contractor shall respond according to instructions in the letter.

(5) Disapproved (Action Code "E"): Submittals which are fundamentally in error, cover wrong equipment or construction, or require extensive corrections, will be returned to the Contractor stamped "Disapproved." [Submittal will be returned electronically](#) to the Contractor and an explanation will be furnished on the submitted material or on ENG Form 4025-R indicating reason for disapproval. Complete resubmittal required.

(6) Receipt Acknowledged (Action Code "F"): Submittals stamped "Receipt Acknowledged" are complete and [returned electronically](#) to the Contractor.

(7) Other (Specify) (Action Code "G"): Submittals requiring other specific action will be stamped "Other (Specify)" and returned with a description in the Remarks section. [Submittal will be returned electronically](#) to the Contractor. Resubmittal of only those items needing correction required.

(8) Receipt Acknowledged, Does Not Comply (Action Code "X"): Submittals which have been received but do not comply with Contract requirements. [Submittal will be returned electronically](#) to the Contractor stamped "Receipt Acknowledged, Does Not Comply" and an explanation will be furnished. Corrective action and resubmittal required.

(9) [Government Concurs with Intermediate Design](#) (Action Code "K"): [Indicates Government concurrence with submitted segment of the intermediate design. Submission and review of the overall final design package remain.](#)

(10) [Design Submittal is Acceptable for Release for Construction](#) (Action Code "R"): [Indicates Government concurrence with specific segments of the overall design package. Contractor may begin construction activities on the submitted segment of the overall work.](#)

b. Resubmittal will not be required for approved submittals unless subsequent changes are made by Contractor or by Contract modification. For submittals required to be resubmitted, Contractor shall make corrections required, note any changes by dating the revisions to correspond with the change request date, and promptly resubmit the corrected material. Resubmittals shall be associated with the "parent" by use of sequential [numbers \(for example, resubmittal of transmittal 8 will be 8.1, 8.2, etc\)](#). Government costs incurred after the first resubmittal may be charged to the Contractor.

1.5.4 Information Only Submittals

1.5.4.1 General

Upload submittal with corresponding ENG 4025 forms as outlined in paragraph entitled e-Submittals. Normally information only submittals will not be returned. Government approval is not required on information only submittals. These submittals will be used for information purposes. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the Contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the CO from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe. For design-build construction, the Government will retain 1 (one) copies of information only submittals.

1.5.4.2 Processing of Information Only Submittals

Submit information only submittals electronically prior to delivery of the material or equipment to the job site. ENG Form 4025-R shall be marked with the words "Contractor approved - information copy only" in the REMARKS block of the form. Submittals will be monitored and spot checks made. When such checks indicate noncompliance, the Contractor will be notified by the same method used for Government Approval submittals. Resubmittal of nonconforming information only submittals shall be reclassified Government Approval ("G") and re-submitted electronically for approval.

1.6 SUBMITTAL COORDINATION

1.6.1 Submittal Coordination Meeting

Meet with the CO, after the preconstruction conference and before any submittals are sent to the CO, to further develop the preliminary submittal register (ENG Form 4288-R). During the meeting identify and group all required items into the categories as shown in paragraph entitled SUBMITTAL DESIGNATION.

1.6.2 Submittal Register ENG Form 4288-R

Coordinate the submittal register with the progress schedule and submit within 30 days of Notice to Proceed. In preparing the final document, allow a minimum of 21 days for review and approval, and possible resubmittal of each item on the register.

1.6.3 Submittal Register Updates

The CQC System Manager shall review the listing at least every 30 days and take appropriate action to maintain an effective system. Submit copies of updated or corrected listings to the CO at least every 30 days in the quantity specified.

1.7 SCHEDULING

Schedule and submit concurrently submittals covering component items forming a system or items that are interrelated. Adequate time (a minimum of 30 calendar days) shall be allowed and shown on the register for Government review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

- a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of work so that work will not be delayed by submittal processing. Allow for potential resubmittal of requirements.
- b. Submittals called for by the Contract documents shall be listed on the register. Approval by the CO does not relieve the Contractor of supplying submittals required by the Contract documents but which have been omitted from the register.
- c. Re-submit register and annotate monthly with actual submission and approval dates. When all items on the register have been fully approved, no further re-submittal is required.
- d. Carefully control procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

1.8 TRANSMITTAL FORM (ENG FORM 4025-R)

Use the sample transmittal form (ENG Form 4025-R, Attachment A2) for submitting both Government Approval and Information Only submittals in accordance with the instructions on the reverse side of the form. These forms are included in the QCS software that the Contractor is required to use for this Contract, per Section 01 11 13.00 25. Fill forms in completely prior to submittal. Exercise special care to ensure proper listing of the specification paragraph number(s) and Contract Drawing sheet number(s) pertinent to the data submitted for each item. List each submittal item separately on the form, naming subcontractor, supplier, or manufacturer; applicable specification paragraph number(s); drawing/sheet number; pay item number; and any other information needed to identify the item, define its use, and locate it in the work. One or more ENG 4025-R forms may be used per Specification Section, however, DO NOT include more than one Specification Section per transmittal.

1.9 CROSS-REFERENCE (ENG FORM 4288-R/ENG FORM 4025-R)

To provide a cross-reference between the approved submittal register and transmittal forms, the Contractor shall record the "transmittal numbers" assigned when submitting items in column "Transmittal No." of the ENG Form 4288-R. The numbers in column "Transmittal No." of the submittal register shall correspond to the column "Item No." on ENG Form 4025-R.

1.10 SUBMITTAL PROCEDURES

Upload submittals in accordance with subparagraphs entitled Government Approved Submittals and Information Only Submittals, unless indicated otherwise in the technical specifications. Submit a complete collated "reviewers copy" with one ENG 4025-R form and attachments (not originals). Submit hard copy and electronic copies of Record (as-built) Drawings and O&M Manuals in accordance with the applicable Specification Sections.

1.10.1 e-Submittals

The intent of electronic submittals is to expedite the construction process by reducing paperwork, improving information flow, and decreasing turnaround time. Transmit all submittals, including either an electronically signed or signed

scanned copy of form ENG 4025, to the Government electronic (PFD) format via email. Submittals shall be entered and tracked using QCS. At completion of Contract closeout, provide a minimum of two archival discs (DVD-R) that include all documents and tracking logs. Color samples, color charts, or physical material samples shall not be transmitted electronically. e-Submittals will not relieve the Contractor from following all applicable requirements within this and other Specifications Sections and Contract Clauses. 1.10.2 Approval of Submittals by the Contractor

- a. Submit names and titles of Contractor **Authorized Shop Drawing Approvers** to the CO with the ENG Form 4288-R. Supplier or subcontractors certifications are not acceptable as meeting this requirement.
- b. Before submittal to the CO, the Contractor's Authorized Shop Drawing Approvers shall review and correct shop drawings prepared by subcontractors, suppliers, and itself, for completeness and compliance with Drawings and Specifications. Do not use red markings for correcting material to be submitted. Red markings are reserved for CO's use.
- c. Submittals for Government Approval shall first be Contractor-approved and stamped, see paragraph entitled CONTRACTOR APPROVAL STAMP. For design-build construction, both the CQC System Manager and the DOR shall stamp and sign to certify that the submittal meets Contract requirements.
- d. Submittals not conforming to the requirements of this Section will be returned to the Contractor for correction and resubmittal.

1.10.3 Variations

Variations from Contract requirements require both Designer of Record (D) and Government (G) approval pursuant to Contract Clause 52.236-21, SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, and will be considered where advantageous to Government.

- a. For submittals which include proposed variations requested by the Contractor, column "h" of ENG Form 4025-R shall be checked, the submittal shall be classified as "G", and submitted accordingly. The Contractor shall set forth in writing the reason for any variations and annotate such variations on the transmittal form in the REMARKS block. Variations are not approved unless there is an advantage to the Government. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted variations.
- b. Specifically point out variations from Contract requirements in transmittal letters. Failure to point out deviations may result in the Government requiring rejection and removal of such work at no additional cost to the Government.

1.10.4 Drawings

Each drawing shall be not larger than D size (22 inches high by 34 inches wide), include a title block in lower right hand corner, and a 3- by 4-inch clear area adjacent. The title block shall contain vendor's name, Contract number, description of item(s), Contract line item number, and a revision block. Separate drawings are required for each Contract line item. Where drawings are submitted for assemblies of more than one piece of equipment or systems, of components dependent on each other for compatible

characteristics, complete information shall be submitted on all such related components at the same time. The information shall be complete and the sequence of drawing submittal shall be such that all information is available for reviewing each drawing. Drawings for all items and equipment, of special manufacture or fabrication, shall consist of complete assembly and detail drawings. All revisions after initial submittal shall be shown by number, date, and subject in revision block. Any drawing or electronic drawing file submitted, that is not of satisfactory quality, will be returned and shall be corrected and re-submitted.

1.10.4.1 As-Built Drawings

Each as-built drawing shall maintain the original size, format, and border sheet as provided by the Government, showing final as-constructed conditions.

1.10.4.2 Shop Drawing Reproducibles

Upon completion of the work under this Contract, provide a complete set of:

a. Electronic drawing files for all the drawings as finally approved under this Contract. Show all changes and revisions, including any field changes, made up to the time that the work is accepted. Include all pertinent data files to reproduce the complete set. Record files on CD-ROM, CD-R discs only, or other digital media noted otherwise in this Contract.

b. Full-size reproducible hard-copy sets of drawings identical to the electronic drawing files. Show all changes and revisions, including field changes, made up to the time that the work is accepted.

1.10.4.3 Printed Material

All requirements for shop drawings shall apply to catalog cuts, illustrations, printed specifications, or other data submitted, except that the 3- by 4-inch clear area adjacent to the title block is not mandatory. Mark out inapplicable portions of the documents. Applicable items such as model numbers, sizes, and accessories shall be indicated by arrow or highlighted.

1.11 SAMPLES REQUIRING LABORATORY ANALYSIS

See Section 01 11 13.00 25 for procedures and address for samples requiring Government testing.

1.12 SAMPLES REQUIRING VISUAL INSPECTION

Coordinate samples requiring only physical inspection for appearance and suitability with the on-site Government Quality Assurance Representative (GQAR).

1.13 FIELD TEST REPORTS

Deliver routine tests such as soil density, concrete deliveries, and repetitive pressure testing to the GQAR with the daily Quality Control reports. <\\nwd\nwp\etds\SPECSINTACT\NWP-EC\JOBS\B2NFLM14\prntdata\Word\doc>

1.14 PURCHASE ORDERS

a. Each purchase order issued by the Contractor for materials and equipment to be incorporated into the work shall:

- (1) Clearly identify the applicable Contract number
- (2) Carry an identifying number
- (3) Be in sufficient detail to identify the material being purchased
- (4) Indicate a definite delivery date.

b. Furnish copies of purchase orders to the CO when the Contractor requests assistance for expediting deliveries of equipment or materials, or when requested by the CO for the purpose of quality assurance review.

1.15 CERTIFICATES OF COMPLIANCE

Submit an electronic copy of certificates required for demonstrating proof of compliance of materials with specification requirements. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company, contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.16 DISAPPROVED SUBMITTALS

a. Make all corrections required by the CO and promptly furnish a corrected submittal in the form specified for the initial submittal. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the Contract drawings or Specifications; notice as required under Contract Clause 52.243-4, CHANGES, is to be given to the CO. The Contractor shall be responsible for the dimensions and design of connection details and construction of work. Failure to point out deviations may result in the Government requiring rejection and removal of such work at the Contractor's expense.

b. If changes are necessary to submittals, make such revisions and re-submit the submittals in accordance with the procedures above. No item of work requiring a submittal change is to be accomplished until the changed submittals are approved.

c. If the submittal is determined not to comply with the terms and conditions of the Contract (the Solicitation, Accepted Proposal, and Contractor's final design complete), then the Contractor shall be responsible to bring the work into compliance with the Contract at the Contractor's expense.

1.17 APPROVED SUBMITTALS

a. The CO's approval or acceptance of submittals shall not be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are satisfactory, design, general method of construction, materials, detailing, and other information appear to meet the Solicitation and Accepted Proposal.

b. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor under the Contactor Quality Control (CQC) requirements of this Contract shall be responsible for design, dimensions, the design of adequate connections and details, and the satisfactory construction of all work.

c. After submittals have been approved by the CO, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.18 APPROVED SAMPLES

a. Approval of a sample is only for the characteristics or use named in such approval and shall not be construed to change or modify any Contract requirements. Before submitting samples, ensure that the materials or equipment will be available in quantities required. No change or substitution will be permitted after a sample has been approved.

b. If requested, approved and/or disapproved samples, including those which may be damaged in testing, will be returned at the expense of the Contractor upon completion of the Contract.

c. Failure of any materials to pass the specified tests will be sufficient cause for refusal to consider, under this Contract, any further samples of the same brand or make of that material. Government reserves the right to disapprove any material or equipment which previously has proved unsatisfactory in service.

d. Samples of various materials or equipment delivered on the site or in place may be taken by the CO for testing. Samples failing to meet Contract requirements will automatically void previous approvals. Contractor shall replace such materials or equipment to meet Contract requirements.

e. Approval of the Contractor's samples by the CO does not relieve the Contractor of his responsibilities under the Contract.

1.19 CONTRACTOR'S FILES

Maintain "Approved as Accepted" and "Approved, Except as Noted on Drawings" (Action Codes "A" and "B") shop drawing files in fabrication shops and at field sites for Government use.

1.20 PAYMENT

Separate payment will not be made for submittals, and all costs associated therein shall be included in the applicable unit prices or lump sum prices contained in the Price Schedule. Payment will not be made for any material or equipment which does not comply with Contract requirements.

1.21 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained. No payment for materials incorporated in the work will be made if all required Designer of Record or Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for Information Only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

1.22 CONTRACTOR APPROVAL STAMP

Stamps used by the Contractor on the submittal data to certify that the submittal meets Contract requirements shall be similar to the following:

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____</p> <p>DATE: _____</p>

For design-build construction, both the CQC System Manager and the Designer of Record shall stamp and sign to certify that the submittal meets Contract requirements.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS
08/10

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization (e.g. ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided. Documents listed in the specifications with numbers which were not assigned by the standards producing organization should be ordered from the source by title rather than by number.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
(AASHTO)
444 North Capital Street, NW, Suite 249
Washington, DC 20001
Ph: 202-624-5800
Fax: 202-624-5806
E-Mail: info@aaashto.org
Internet: <http://www.aashto.org>

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

1800 East Oakton Street
Des Plaines, IL 60018-2187
Ph: 847-699-2929
Fax: 847-768-3434
E-mail: customerservice@asse.org
Internet: <http://www.asse.org>

AMERICAN WELDING SOCIETY (AWS)
8669 NW 36 Street, #130550 N.W. LeJeune Road
Miami, FL 33166-6672
Ph: 800-443-9353 - 305-443-9353
Fax: 305-443-7559
E-mail: info@aws.org or customerservice@awspubs.com
Internet: <http://www.aws.org>

ASME INTERNATIONAL (ASME)

Three Park Avenue, M/S 10E
New York, NY 10016-5990
Ph: 800-854-7179 or 800-843-2763
Fax: 212-591-7674
E-mail: infocentral@asme.org
Internet: <http://www.asme.org>

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9585
Fax: 610-832-9555
E-mail: service@astm.org
Internet: <http://www.astm.org>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)
1 Batterymarch Park
Quincy, MA 02169-7471
Ph: 617-770-3000 or 800-344-3555
Fax: 617-770-0700
E-mail: webmaster@nfpa.org
Internet: <http://www.nfpa.org>

U.S. ARMY CORPS OF ENGINEERS (USACE)
Order CRD-C DOCUMENTS from:
U.S. Army Engineer Waterways Experiment Station
ATTN: Technical Report Distribution Section, Services
Branch, TIC
3909 Halls Ferry Road
Vicksburg, MS 39180-6199
E-mail: MTC-INFO@erdc.usace.army.mil
Internet: <http://gsl.erd.usace.army.mil/SL/MTC/handbook/handbook.htm>
Order Other Documents from:
USACE Publications Depot
Attn: CEHEC-IM-PD
2803 52nd Avenue
Hyattsville, MD 20781-1102
Ph: 301-394-0081
Fax: 301-394-0084
E-mail: pubs-army@usace.army.mil
Internet: <http://www.usace.army.mil/publications>
or
<http://www.hnc.usace.army.mil/Missions/Engineering/TECHINFO.aspx>

U.S. DEPARTMENT OF AGRICULTURE (USDA)
Order AMS Publications from:
AGRICULTURAL MARKETING SERVICE (AMS)
Seed Regulatory and Testing Branch
801 Summit Crossing Place, Suite C
Gastonia, NC 28054-2193
Ph: 704-810-8871
Fax: 704-852-4189
E-mail: seed.ams@usda.gov
Internet: <http://www.ams.usda.gov/lsg/seed.htm>
Order Other Publications from:
U.S. Department of Agriculture, Rural Utilities Service
14th and Independence Avenue, SW, Room 4028-S

Washington, DC 20250
Ph: 202-720-2791
Fax: 202-720-2166
Internet: <http://www.usda.gov/rus>

U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
8601 Adelphi Road
College Park, MD 20740-6001
Ph: 866-272-6272
Fax: 301-837-0483
E-mail: contactcenter@gpo.gov
Internet: <http://www.archives.gov>
Order documents from:
Superintendent of Documents
U.S. Government Printing Office (GPO)
732 North Capitol Street, NW
Washington, DC 20401
Ph: 202-512-1800
Fax: 202-512-2104
E-mail: contactcenter@gpo.gov
Internet: <http://www.gpoaccess.gov>

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

SECTION 05 50 14.00 25

STRUCTURAL METAL FABRICATIONS
11/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN WELDING SOCIETY (AWS)

AWS D1.6/D1.6M (2007) Structural Welding Code - Stainless Steel

ASTM INTERNATIONAL (ASTM)

ASTM A240/A240M (2012a) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

ASTM A276 (2010) Standard Specification for Stainless Steel Bars and Shapes

ASTM F593 (2002; R 2008; E 2012) Stainless Steel Bolts, Hex Cap Screws, and Studs

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00, SUBMITTAL PROCEDURES:

SD-03 Product Data

Stainless Steel Drop-In Anchor; G

Stainless Steel J-Bolts; G

Stainless Steel Grating Clips; G

Multi- Purpose , Surface Tolerant Epoxy; G

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Stainless Steel Hexagon Socket Flat Countersunk Head Cap Screws and Stainless Steel Drop-In Anchor

Stainless Steel Hexagon Socket Flat Countersunk Head shall be AISI 300-series stainless steel and conform to [ASTM F593](#).

2.1.2 [Stainless Steel J-Bolts](#)

Threaded J-Bolts shall conform to AISI 300-series stainless steel. Nuts and washers shall be the same as the J-bolts. Types of J-bolts shall be as indicated on drawings.

2.1.3 [Stainless Steel Grating Clips](#)

All grating clips shall be AISI 300-series stainless steel. Grating clips shall have a smooth, rounded surface profile and shall be properly sized and countersunk for the specified J-bolts with nuts.

2.1.4 [Stainless Steel Plates](#)

All stainless steel plates shall conform to [ASTM A240/A240M](#), AISI Type 316L. All stainless steel bars and shapes shall conform to [ASTM A276](#), AISI Type 316L.

2.1.5 [Multi- Purpose , Surface Tolerant Epoxy](#)

All stainless steel plates shall be coat with Multi- Purpose , Surface Tolerant Epoxy (fish firendly Epoxy) per its manufature recomendation.

2.2 FABRICATION

2.2.1 [Structural Fabrication](#)

Material shall be straight before being laid off or worked. Perform straightening, if necessary, by methods that will not impair the metal. Any sharp kinks or bends will be cause for rejection of the material. Material with welds will not be accepted except where welding is definitely specified, indicated or otherwise approved. Make bends using approved dies, press brakes or bending rolls. Where heating is required, take precautions to avoid overheating the metal and allow it to cool in a manner that will not impair the original properties of the metal. Proposed flame cutting of material, other than structural steel, will be subject to approval and shall be indicated on detail drawings. Shearing shall be accurate and all portions of the work neatly finished. Corners shall be square and true unless otherwise shown. Re-entrant cuts shall be filleted to a minimum radius of [3/4 inch](#) unless otherwise approved. Provide finished members free of twists, bends and open joints. Bolts, nuts, and screws shall be tight.

2.2.1.1 [Dimensional Tolerances for Structural Work](#)

Measure dimensions using an approved calibrated steel tape of approximately the same temperature as the material being measured. The overall dimensions of an assembled structural unit shall be within the tolerances indicated on the drawings or as specified in the particular Section of these specifications for the item of work. Where tolerances are not specified in other Sections of these specifications or shown, an allowable variation of [1/32 inch](#) is permissible in the overall length of component members with both ends milled; component members without milled ends shall not deviate from the dimensions shown by more than [1/16 inch](#) for members [30 feet](#) or less in length, and by more than [1/8 inch](#) for members over [30 feet](#) in length.

2.2.1.2 Structural Steel Fabrication

Structural steel may be cut by mechanically guided or hand-guided torches, provided an accurate profile with a surface that is smooth and free from cracks and notches is obtained. Prepare surfaces and edges in accordance with AWS D1.6/D1.6M, Subsection 3.2. Where structural steel is not to be welded, chipping or grinding will not be required except as necessary to remove slag and sharp edges of mechanically guided or hand-guided cuts not exposed to view. Chip, grind, or machine to sound metal hand-guided cuts which are to be exposed or visible.

2.2.2 Bolted Connections

Provide bolts, screws, nuts, and washers of the type specified or indicated. Equip all nuts with washers where indicated on the drawings.

- a. Bolt holes shall be accurately located, smooth, perpendicular to the member, and cylindrical.
- b. Holes for regular bolts and screw shall be drilled or subdrilled and reamed in the shop and not be more than 1/16 inch larger than the diameter of the bolt or screw.

2.3 LAMPREY DIFFUSER PLATING

All surfaces shall be ground to a 125 finish or smoother to prevent injury to lamprey. All exposed edges of fabrications shall be sbreak to 1/16-inch radius unless otherwise noted.

PART 3 EXECUTION

3.1 INSTALLATION

- a. Thoroughly clean all parts to be installed. Remove packing compounds, rust, dirt, grit and other foreign matter from fabricated plates by contractor and government furnished plates. Do not use pipe wrenches, cold chisels or other tools likely to cause damage to the surfaces of rods, nuts or other parts used for assembling and tightening parts. Tighten bolts and screws firmly and uniformly but take care not to overstress the threads.
- b. Accurately align each machinery or structural unit by the use of steel shims or other approved methods so that no binding in any moving parts or distortion of any member occurs before it is fastened in place. The alignment of all parts with respect to each other shall be true within the respective tolerances required.

3.2 INSTALLATION OF DIFFUSER PLATING

Install the lamprey diffuser plating as indicated.

End of Section --

