UNITED STATES DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service
1875 Century Boulevard, Suite 310
Atlanta, Georgia 30345

TECHNICAL SPECIFICATIONS FOR

W.O. #: 2021393874

BAYOU SAUVAGE NATIONAL WILDLIFE REFUGE
NEW ORLEANS, LOUISIANA

RIDGE TRAIL BOARDWALK REHABILITATION

August 31, 2023

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PROJECT TABLE OF CONTENTS

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SECTION 01 11 00

SUMMARY OF WORK
08/15, CHG 2: 08/21

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 Project Description

The boardwalk for this wildlife refuge is located outside of Northeast New Orleans off Highway 90. It is in a secluded area with marsh terrain with some water present on the north and southeast parts of the boardwalk. The typical boardwalk section is 6’ wide with decking made up of 2x6 wood that appears to be a type of pine. The path is approximately 1/2 mile long with observations points and added decking for rest stop points. The age of the boardwalk itself is unknown but estimated to be around 30 years old. This project will consist of replacement of the boardwalk.

1.1.2 Location

The work is located at the Bayou Sauvage National Wildlife RefugeSouth Atlantic-Gulf & Mississippi Basin Region, approximately as indicated. The coordinates for jobsite locations are as follows: Latitude: 30.0536° N Longitude: 89.8805° W.

1.2 EXISTING WORK

In addition to FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.

b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.

1.3 WORK HOURS & HOUSE KEEPING

Hours of permissible work are Monday through Friday during daylight hours, no federal holidays.

Access to the boardwalk and levee trail will be closed for the duration of boardwalk construction. Contractor is required to provide temporary fencing to secure the project site at the road. FWS will disconnect the gate in open position. Contractor to daisy chain lock with FWS lock at the temporary fencing at entrance.

Trash Removal - Remove all wood scraps from project site daily. No wood scraps left on property or under boardwalk.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS
11/20, CHG 2: 05/22

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety -- Safety and Health Requirements Manual

1.2 MINIMUM INSURANCE REQUIREMENTS

Provide the minimum insurance coverage required by FAR 28.307-2 Liability, during the entire period of performance under this contract. Provide other insurance coverage as required by State law.

1.3 SUPERVISION

1.3.1 Superintendent Qualifications

Provide project superintendent with a minimum of 10 years experience in construction with at least 5 of those years as a superintendent on projects similar in size and complexity. The individual must be familiar with the requirements of EM 385-1-1 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and construction drawings. The qualification requirements for the alternate superintendent are the same as for the project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the project if the performance of the superintendent is in question.

For projects where the superintendent is permitted to also serve as the Quality Control (QC) Manager as established in Section 01 45 00.00 10 QUALITY CONTROL, the superintendent must have qualifications in accordance with that section.

1.3.2 Minimum Communication Requirements

Have at least one qualified superintendent, or competent alternate, capable of reading, writing, and conversing fluently in the English language, on the job-site at all times during the performance of Contract work. In addition, if a Quality Control (QC) representative is required on the Contract, then that individual must also have fluent English communication skills.

1.3.3 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the contract and for failure to manage the project to ensure timely completion. Furthermore, the Contracting Officer may issue an order stopping all or

part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders is acceptable as the subject of claim for extension of time for excess costs or damages by the Contractor.

1.4 PRECONSTRUCTION MEETING

Immediately after award, prior to commencing any work at the site, coordinate with the Contracting Officer a time and place to meet for the Preconstruction Meeting. The conference must take place within 60 calendar days after award of the contract, but prior to commencement of any work at the site. The purpose of this meeting is to discuss and develop a mutual understanding of the administrative requirements of the Contract including but not limited to: daily reporting, invoicing, value engineering, safety, refuge-access, outage requests, hot work permits, schedule requirements, quality control, schedule of prices or earned value report, shop drawings, submittals, cybersecurity, prosecution of the work, government acceptance, final inspections and contract close-out. Contractor must present and discuss their basic approach to scheduling the construction work and any required phasing. Preconstruction meeting will be located SELA Refuges Complex, 61389 Highway 434, Lacombe, LA 70445

1.4.1 Attendees

Contractor attendees must include the Project Manager, Superintendent, Site Safety and Health Officer (SSHO), Quality Control Manager and major subcontractors. Contractor to arrive for meeting with a total of (5) complete hard copy sets of construction documents.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES
08/18, CHG 4: 02/21

PART 1 GENERAL

1.1 SUMMARY

Submittal as required in individual subdivisions shall be submitted to the Contracting Officer's Representative by the Contractor.

No item requiring approval shall be installed without prior approval by the Contracting Officer.

Use of unspecified or unapproved materials or equipment will not be permitted.

When submitting a substitute material/equipment, the Contractor shall clearly define any deviations from the specified item. It is the responsibility of the Contractor to provide that the submitted item meets all requirements of the contract.

All shop drawings shall indicate how the submitted item builds into or is attached to the adjacent construction. All modifications to details shown on the contract drawings shall be approved prior to installation of the submitted item.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD)

Submittal requirements are specified in the technical sections. Examples and descriptions of submittals identified by the Submittal Description (SD) numbers and titles follow:

SD-01 Preconstruction Submittals

Submittals that are required prior to or commencing with the start of work on site.

For Government approved division 01 preconstruction submittals that are required prior to or commencing with the start of work shall be submitted within 30 calendar days of contract award unless specified elsewhere in the specifications. For contractor approved division 01 submittals that are required prior to or commencing with the start of work shall be submitted within 45 calendar days of contract award unless specified elsewhere in the specifications.

Preconstruction Submittals include schedules and a tabular list of locations, features, and 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

Baseline Network Analysis Schedule (NAS)

Submittal Register

Schedule Of Prices Or Earned Value Report

Accident Prevention Plan

Work Plan

Quality Control (QC) plan

Environmental Protection Plan

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

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.

Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards ensuring work can be judged. Includes assemblies or portions of assemblies that are to be incorporated into the project and those that will be removed at conclusion of the work.

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 accord with specified

requirements. Unless specified in another section, testing must have been within three years of date of contract award for the project.

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

Report that 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

SD-07 Certificates

Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets specification requirements. Must 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 document purpose is to further promote the 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.

Submittals required for Guiding Principle Validation (GPV) or Third Party Certification (TPC).

Special requirements necessary to properly close out a construction contract. For example, Record Drawings and as-built drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase contract.

1.2.2 Approving Authority

Office or designated person authorized to approve the submittal.

1.2.3 Work

As used in this section, on-site and off-site construction required by contract documents, including labor necessary to produce submittals, construction, materials, products, equipment, and systems incorporated or to be incorporated in such construction. In exception, excludes work to produce SD-01 submittals.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or “S” classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Submittal Register; G

Schedule Of Values

Accident Prevention Plan

Organization Chart

1.4 SUBMITTAL CLASSIFICATION

1.4.1 Government Approved (G)

Government approval is required for extensions of design, critical materials, variations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Government.

Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, submittals are considered to be "shop drawings."

1.4.2 For Information Only

Submittals not requiring Government approval will be for information only. Within the terms of the Contract Clause SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION, they are not considered to be "shop drawings."

1.5 PREPARATION

1.5.1 Transmittal Form

Transmit each submittal, except sample installations and sample panels to the office of the approving authority using the transmittal form prescribed by the Contracting Officer. Include all information prescribed by the transmittal form and required in paragraph IDENTIFYING SUBMITTALS. Use the submittal transmittal forms to record actions regarding samples.

1.5.2 Identifying Submittals

The Contractor's Quality Control Manager must prepare, review and stamp submittals, including those provided by a subcontractor, before submittal to the Government.

Identify submittals, except sample installations and sample panels, with the following information permanently adhered to or noted on each separate component of each submittal and noted on transmittal form. Mark each copy of each submittal identically, with the following:

a. Project title and location

b. Construction contract number

c. Dates of the drawings and revisions

d. Name, address, and telephone number of Subcontractor, supplier, manufacturer, and any other Subcontractor associated with the submittal.

e. Section number of the specification by which submittal is required

f. Submittal description (SD) number of each component of submittal

g. For a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission

h. Product identification and location in project.

1.5.3 Submittal Format

1.5.3.1 Format of SD-01 Preconstruction Submittals

When the submittal includes a document that is to be used in the project, or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

Contractor to submit schedule of values for review prior to fist pay application submission. Schedule of values should be broken out by areas in a way that is project progress can clearly be tracked.

Contractor to provide an Accident Prevention Plan and polices. Safety plan should be site specific

Contractor to provide organization chart identifying roles of key personnel for the project.

1.5.3.2 Format for SD-02 Shop Drawings

Provide shop drawings not less than 8 1/2 by 11 inches nor more than 30 by 42 inches, except for full-size patterns or templates. Prepare drawings to accurate size, with scale indicated, unless another form is required. Ensure drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

a. Include the nameplate data, size, and capacity on drawings. Also include applicable federal, military, industry, and technical society publication references.

b. Dimension drawings, except diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Use the same unit of measure for shop drawings as indicated on the contract drawings. Identify materials and products for work shown.

Present shop drawings sized 8 1/2 by 11 inches as part of the bound volume for submittals. Present larger drawings in sets. Submit an electronic copy of drawings in PDF format.

1.5.3.2.1 Drawing Identification

Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to information required in paragraph IDENTIFYING SUBMITTALS.

Number drawings in a logical sequence. Each drawing is to bear the number of the submittal in a uniform location next to the title block. Place the Government contract number in the margin, immediately below the title block, for each drawing.

Reserve a blank space, no smaller than 4" x 4" inches on the right-hand side of each sheet for the Government disposition stamp.

1.5.3.3 Format of SD-03 Product Data

Present product data submittals for each section as a complete, bound volume. Include a table of contents, listing the page and catalog item numbers for product data.

Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.

1.5.3.3.1 Product Information

Supplement product data with material prepared for the project to satisfy the submittal requirements where product data does not exist. Identify this material as developed specifically for the project, with information and format as required for submission of SD-07 Certificates.

Provide product data in units used in the Contract documents. Where product data are included in preprinted catalogs with another unit, submit the dimensions in contract document units, on a separate sheet.

1.5.3.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society, reference standards of such organizations as the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), or Association of Edison Illuminating Companies (AEIC), submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.5.3.3.3 Data Submission

Collect required data submittals for each specific material, product, unit of work, or system into a single submittal that is marked for choices, options, and portions applicable to the submittal. Mark each copy of the product data identically. Partial submittals will not be accepted for expedition of the construction effort.

Submit the manufacturer's instructions before installation.

1.5.3.4 Format of SD-04 Samples

1.5.3.4.1 Sample Characteristics

Furnish samples in the following sizes, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:

a. Sample of Equipment or Device: Full size.

b. Sample of Materials Less Than 2 by 3 inches: Built up to 8 1/2 by 11 inches.

c. Sample of Materials Exceeding 8 1/2 by 11 inches: Cut down to 8 1/2 by 11 inches and adequate to indicate color, texture, and material variations.

d. Sample of Linear Devices or Materials: 10 inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.

e. Sample Volume of Nonsolid Materials: Pint. Examples of nonsolid materials are sand and paint.

f. Color Selection Samples: 2 by 4 inches. Where samples are specified for selection of color, finish, pattern, or texture, submit the full set of available choices for the material or product specified. Sizes and quantities of samples are to represent their respective standard unit.

g. Sample Panel: 4 by 4 feet.

h. Sample Installation: 100 square feet.

1.5.3.4.2 Sample Incorporation

Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at the time of use.

Recording of Sample Installation: Note and preserve the notation of any area constituting a sample installation, but remove the notation at the final clean-up of the project.

1.5.3.4.3 Comparison Sample

Samples Showing Range of Variation: Where variations in color, finish, pattern, or texture are unavoidable due to nature of the materials, submit sets of samples of not less than three units showing extremes and middle of range. Mark each unit to describe its relation to the range of the variation.

When color, texture, or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.5.3.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.

1.5.3.6 Format of SD-06 Test Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.3.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch paper. Provide a bound volume for submittals containing numerous pages.

1.5.3.8 Format of SD-08 Manufacturer's Instructions

Present manufacturer's instructions submittals for each section as a complete, bound volume. Include the manufacturer's name, trade name, place of manufacture, and catalog model or number on product data. Also include applicable federal, military, industry, and technical-society publication references. If supplemental information is needed to clarify the manufacturer's data, submit it as specified for SD-07 Certificates.

Submit the manufacturer's instructions before installation.

1.5.3.9 Format of SD-09 Manufacturer's Field Reports

Provide reports on 8 1/2 by 11 inch paper in a complete bound volume.

By prominent notation, indicate each report in the submittal. Indicate the specification number and paragraph number to which each report pertains.

1.5.3.10 Format of SD-11 Closeout Submittals

When the submittal includes a document that is to be used in the project or is to become part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document itself, but to a separate sheet accompanying the document.

Provide data in the unit of measure used in the contract documents.

1.5.4 Source Drawings for Shop Drawings

1.5.4.1 Source Drawings

The entire set of source drawing files (DWG) will not be provided to the Contractor. Request the specific Drawing Number for the preparation of shop drawings. Only those drawings requested to prepare shop drawings will be provided. These drawings are provided only after award.

1.5.4.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for

the referenced project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

These electronic source drawing files are not construction documents. Differences may exist between the source drawing files and the corresponding construction documents. The Government makes no representation regarding the accuracy or completeness of the electronic source drawing files, nor does it make representation to the compatibility of these files with the Contractor hardware or software. The Contractor is responsible for determining if any conflict exists. In the event that a conflict arises between the signed and sealed construction documents prepared by the Government and the furnished source drawing files, the signed and sealed construction documents govern. Use of these source drawing files does not relieve the Contractor of the duty to fully comply with the contract documents, including and without limitation the need to check, confirm and coordinate the work of all contractors for the project. If the Contractor uses, duplicates or modifies these electronic source drawing files for use in producing construction data related to this contract, remove all previous indication of ownership (seals, logos, signatures, initials and dates).

1.5.5 Electronic File Format

Provide submittals in electronic format, with the exception of material samples required for SD-04 Samples items. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer. Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file. When required, the electronic file must include a valid electronic signature or a scan of a signature.

1.6 INFORMATION ONLY SUBMITTALS

Submittals without a "G" designation must be certified by the QC manager and submitted to the Contracting Officer for information-only. Provide information-only submittals to the Contracting Officer a minimum of 14 calendar days prior to the Preparatory Meeting for the associated Definable Feature of Work (DFOW). Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Government reserves the right to return unsatisfactory submittals and 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 Contracting Officer 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.

1.7 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the specifications is provided as "Appendix A - Submittal Register."

1.7.1 Submittal Management

Prepare and maintain a submittal register, as the work progresses. Do not change data that is output in columns (c), (d), (e), and (f) as delivered by Government; retain data that is output in columns (a), (g), (h), and (i) as approved. As an attachment, provide a submittal register showing items of equipment and materials for which submittals are required by the specifications. This list may not be all-inclusive and additional submittals may be required.

Column (c): Lists specification section in which submittal is required.

Column (d): Lists each submittal description (SD Number. and type, e.g., SD-02 Shop Drawings) required in each specification section.

Column (e): Lists one principal paragraph in each 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 the project requirements.

Column (f): Lists the approving authority for each submittal.

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

1.7.2 Preconstruction Use of Submittal Register

Submit the submittal register. Include the QC plan and the project schedule. Verify that all submittals required for the project are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the project schedule:

Column (a) Activity Number: Activity number from the project schedule.

Column (g) Contractor Submit Date: Scheduled date for the approving authority to receive submittals.

Column (h) Contractor Approval Date: Date that Contractor needs approval of submittal.

Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.7.3 Contractor Use of Submittal Register

Update the following fields with each submittal throughout the contract.

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.7.4 Approving Authority Use of Submittal Register

Update the following fields:

Column (b) Transmittal Number: List of consecutive, Contractor-assigned numbers.

Column (l) Date submittal was received.

Column (m) through (p) Dates of review actions.

Column (q) Date of return to Contractor.

1.7.5 Action Codes

1.7.5.1 Government Review Action Codes

"A" - "Approved as submitted"

"AN" - "Approved as noted"

"RR" - "Disapproved as submitted"; "Completed"

"NR" - "Not Reviewed"

"RA" - "Receipt Acknowledged"

1.7.6 Delivery of Copies

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request. Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.8 DISAPPROVED SUBMITTALS

Make corrections required by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract drawings or specifications, give notice to the Contracting Officer as required under the FAR clause titled CHANGES. The Contractor is responsible for the dimensions and design of connection details and the construction of work. Failure to point out variations may cause the Government to require rejection and removal of

such work at the Contractor's expense.

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

1.9 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that.

Approval or acceptance by the Government for a submittal does not relieve the Contractor of the responsibility for meeting the contract requirements or for any error that may exist, because under the Quality Control (QC) requirements of this contract, the Contractor is responsible for ensuring information contained with in each submittal accurately conforms with the requirements of the contract documents.

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

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

Print Form | Save As | E-mail

U.S. Army Corps of Engineers (USACE)

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE

For use of this form, see ER 415-1-10; the proponent agency is CECW-CE.

DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (*This section will be initiated by the contractor*)

TO:	FROM:	CONTRACT NO.	CHECK ONE: ☐ THIS IS A NEW TRANSMITTAL ☐ THIS IS A RESUBMITTAL OF TRANSMITTAL _____

SPECIFICATION SEC. NO. (*Cover only one section with each transmittal*)	PROJECT TITLE AND LOCATION	THIS TRANSMITTAL IS FOR: (*Check one*) ☐ FIO ☐ GA ☐ DA ☐ CR ☐ DA/CR ☐ DA/GA

ITEM NO. (*See Note 3*)	**DESCRIPTION OF SUBMITTAL ITEM** (*Type size, model number/etc.*)	**SUBMITTAL TYPE CODE** (*See Note 8*)	**NO. OF COPIES**	**CONTRACT DOCUMENT REFERENCE**		**CONTRACTOR REVIEW CODE**	**VARIATION** Enter "Y" if requesting a variation (*See Note 6*)	**USACE ACTION CODE** (*Note 9*)
				SPEC. PARA. NO.	**DRAWING SHEET NO.**			
a.	**b.**	**c.**	**d.**	**e.**	**f.**	**g.**	**h.**	**i.**

REMARKS

I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

NAME OF CONTRACTOR	SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURES RETURNED (*List by item No.*)	NAME AND TITLE OF APPROVING AUTHORITY	SIGNATURE OF APPROVING AUTHORITY	DATE

Print Form | Save As | E-mail

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.

2. Each Transmittal shall be numbered consecutively. The Transmittal Number typically includes two parts separated by a dash (-). The first part is the specification section number. The second part is a sequential number for the submittals under that spec section. If the Transmittal is a resubmittal, then add a decimal point to the end of the original Transmittal Number and begin numbering the resubmittal packages sequentially after the decimal.

3. The "Item No." for each entry on this form will be the same "Item No." as indicated on ENG FORM 4288-R.

4. Submittals requiring expeditious handling will be submitted on a separate ENG Form 4025-R.

5. Items transmitted on each transmittal form will be from the same specification section. Do not combine submittal information from different specification sections in a single transmittal.

6. If the data submitted are intentionally in variance with the contract requirements, indicate a variation in column h, and enter a statement in the Remarks block describing he detailed reason for the variation.

7. ENG Form 4025-R is self-transmitting - a letter of transmittal is not required.

8. When submittal items are transmitted, indicate the "Submittal Type" (*SD-01 through SD-11*) in column c of Section I.
Submittal types are the following:

SD-01 - Preconstruction SD-02 - Shop Drawings SD-03 - Product Data SD-04 - Samples SD-05 - Design Data SD-06 - Test Reports
SD-07 - Certificates SD-08 - Manufacturer's Instructions SD-09 - Manufacturer's Field Reports SD-10 - O&M Data SD-11 - Closeout

9. For each submittal item, the Contractor will assign Submittal Action Codes in column g of Section I. The U.S. Army Corps of Engineers approving authority will assign Submittal Action Codes in column i of Section I. The Submittal Action Codes are:

A -- Approved as submitted.
B -- Approved, except as noted on drawings. Resubmission not required.
C -- Approved, except as noted on drawings. Refer to attached comments. Resubmission required.
D -- Will be returned by separate correspondence.
E -- Disapproved. Refer to attached comments.
F -- Receipt acknowledged.
X -- Receipt acknowledged, does not comply with contract requirements, as noted.
G -- Other action required *(Specify)*
K -- Government concurs with intermediate design. (*For D-B contracts*)
R -- Design submittal is acceptable for release for construction. (*For D-B contracts*)

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract.

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Ridge Trail Boardwalk Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH #	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)		(q)	(r)
		01 33 00	SD-01 Preconstruction Submittals																
			Submittal Register	1.7	G														
			Schedule Of Values	1.5.3.1															
			Accident Prevention Plan	1.5.3.1															
			Organization Chart	1.5.3.1															
		01 45 00.00 10	SD-01 Preconstruction Submittals																
			Contractor Quality Control (CQC)	3.2	G														
			Plan																
		01 57 19	SD-01 Preconstruction Submittals																
			Environmental Protection Plan	1.5	G														
		01 78 00	SD-11 Closeout Submittals																
			As-Built Drawings	3.1	G														
		02 41 00	SD-01 Preconstruction Submittals																
			Demolition Plan	1.2.2	G														
			Existing Conditions	1.6															
			Inventory Of Signs To Be	1.6															
			Removed And Reinstalled.																
		05 50 13	SD-02 Shop Drawings																
			Floor Gratings	2.3	G														
			SD-03 Product Data																
			Floor Gratings	2.3	G														
		05 52 00	SD-02 Shop Drawings																
			Fabrication Drawings	1.2	G														
		06 10 00	SD-03 Product Data																
			Fasteners	2.3	G														
			SD-06 Test Reports																

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION
Ridge Trail Boardwalk Rehabilitation

CONTRACTOR

ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAG # RAPH	CLASSIFICATION	GOVT OR A/E REVWR	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION			APPROVING AUTHORITY					MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS
							SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE	DATE OF ACTION		
(a)	(b)	(c)	(d)	(e)	(f)		(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)		(q)	(r)
		06 10 00	Preservative-treated	1.4.2															
			SD-07 Certificates																
			Certificates of Grade	1.6.1															
			Preservative Treatment	1.5															
		06 13 33	SD-06 Test Reports																
			Preservative Treatment	1.4.1	G														
			Hammer And Pile Driving Plan	1.4.3	G														
			SD-07 Certificates																
			SDS and CIS	1.4.2	G														
			Best Management Practices	1.4.4	G														
			(BMPs)																
		12 93 00	SD-02 Shop Drawings																
			Benches and Chairs	2.3	G														
			SD-03 Product Data																
			Benches and Chairs	2.3															
			SD-04 Samples																
			Finish	2.2.1	G														

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS
02/19

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.

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
130 East Randolph, Suite 2000
Chicago, IL 60601
Ph: 312-670-5444
Fax: 312-670-5403
Steel Solutions Center: 866-275-2472
E-mail: solutions@aisc.org
Internet: https://www.aisc.org/

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
7012 South Revere Parkway, Suite 140
Centennial, CO 80112
Ph: 503-639-0651
Fax: 503-684-8928
E-mail: mschoen@wclib.org
Internet: http://www.aitc-glulam.org

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)
Two Park Avenue
New York, NY 10016-5990
Ph: 800-843-2763
Fax: 973-882-1717
E-mail: customercare@asme.org
Internet: https://www.asme.org/

AMERICAN WOOD COUNCIL (AWC)
222 Catoctin Circle SE, Suite 201
Leesburg, VA 20175
Ph: 800-890-7732
Fax: 412-741-0609
E-mail: publications@awc.org
Internet: https://www.awc.org/

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)
P.O. Box 361784
Birmingham, AL 35236-1784
Ph: 205-733-4077
Fax: 205-733-4075
Internet: http://www.awpa.com

APA - THE ENGINEERED WOOD ASSOCIATION (APA)
7011 South 19th St.
Tacoma, WA 98466-5333
Ph: 253-565-6600
Fax: 253-565-7265
Internet: https://www.apawood.org/

ASTM INTERNATIONAL (ASTM)
100 Barr Harbor Drive, P.O. Box C700
West Conshohocken, PA 19428-2959
Ph: 610-832-9500
Fax: 610-832-9555
E-mail: service@astm.org
Internet: https://www.astm.org/

INTERNATIONAL CODE COUNCIL (ICC)
500 New Jersey Avenue, NW
6th Floor, Washington, DC 20001
Ph: 800-786-4452 or 888-422-7233
Fax: 202-783-2348
E-mail: order@iccsafe.org
Internet: https://www.iccsafe.org/

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)
800 Roosevelt Road, Bldg C, Suite 312
Glen Ellyn, IL 60137
Ph: 630-942-6591
Fax: 630-790-3095
E-mail: info@naamm.org
Internet: http://www.naamm.org

SOUTHERN PINE INSPECTION BUREAU (SPIB)
P.O. Box 10915
Pensacola, FL 32524-0915
Ph: 850-434-2611 or 800-995-7742
Fax: 850-434-1290
E-mail: spib@spib.org
Internet: https://www.spib.org/

TRUSS PLATE INSTITUTE (TPI)
218 N. Lee Street, Suite 312
Alexandria, VA 22314
Ph: 703-683-1010
Fax: 866-501-4012
E-mail: info@tpinst.org
Internet: https://www.tpinst.org/

U.S. ARMY CORPS OF ENGINEERS (USACE)
CRD-C DOCUMENTS available on Internet:
http://www.wbdg.org/ffc/army-coe/standards

Order Other Documents from:
Official Publications of the Headquarters, USACE
E-mail: hqpublications@usace.army.mil
Internet: http://www.publications.usace.army.mil/
or
https://www.hnc.usace.army.mil/Missions/Engineering-Directorate/TECHINFO/

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)
12503 SE Mill Plain Blvd, Ste 205
Vancouver, WA 98684
Ph: 360-693-9958
Internet: https://wwpinstitute.org/

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

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SECTION 01 45 00.00 10

QUALITY CONTROL
11/16, CHG 2: 11/21

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control (CQC) Plan; G

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

Establish and maintain an effective quality control (QC) system that complies with FAR 52.246-12 Inspection of Construction. QC consist of plans, procedures, and organization necessary to produce an end product which complies with the Contract requirements. The QC system covers all construction operations, both onsite and offsite, and be keyed to the proposed construction sequence. The project superintendent will be held responsible for the quality of work and is subject to removal by the Contracting Officer for non-compliance with the quality requirements specified in the Contract. In this context the highest level manager responsible for the overall construction activities at the site, including quality and production is the project superintendent. The project superintendent maintains a physical presence at the site at all times and is responsible for all construction and related activities at the site, except as otherwise acceptable to the Contracting Officer.

3.2 CONTRACTOR QUALITY CONTROL (CQC) PLAN

Submit no later than 30 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements FAR 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. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional work.

3.2.1 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 a chart

showing lines of authority and acknowledgment that the CQC staff will implement the three phase control system for all aspects of the work specified. Include a CQC System Manager that reports to an individual other than the project superintendent. The individual should be outside of the project superintendent's chain of command and must be shown as at least one level above the project superintendent in the chain of command.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the Contract. Letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities will be issued by the CQC System Manager. Furnish copies of these letters to the Contracting Officer.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, offsite fabricators, suppliers, and purchasing agents. These procedures must be in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities approved by the Contracting Officer are required to be used.)

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. Establish verification procedures that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. 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 is identified by different trades or disciplines, or it is work by the same trade in a different environment. Although each section of the specifications can generally be considered as a definable feature of work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

3.2.2 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in the Contractor Quality Control (CQC) Plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.3 SUBMITTALS AND DELIVERABLES

Submittals, if needed, have to comply with the requirements in Section 01 33 00 SUBMITTAL PROCEDURES. The CQC organization is responsible for certifying that all submittals and deliverables are in compliance with the contract requirements.

3.4 COMPLETION INSPECTION

3.4.1 Punch-Out Inspection

Conduct an inspection of the work by the CQC System Manager near the end of the work, or any increment of the work established by a time stated in FAR 52.211-10 Commencement, Prosecution, and Completion of Work, or by the specifications. Prepare and include in the CQC documentation a punch list of items which do not conform to the approved drawings and specifications. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

3.4.2 Pre-Final Inspection

The Government will perform the pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. 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. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph need to be accomplished 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.

3.4.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative is required to be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Refuge Facility Engineer user groups, and major commands can also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notify the Contracting Officer 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. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance FAR 52.246-12 Inspection of Construction.

-- End of Section --

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SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS
08/22

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Environmental Pollution and Damage

Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally or historically.

1.1.2 Environmental Protection

Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.1.3 Waters of the United States

Waters of the United States means Federally jurisdictional waters, including wetlands, that are subject to regulation under Section 404 of the Clean Water Act or navigable waters, as defined under the Rivers and Harbors Act.

1.1.4 Wetlands

Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Environmental Protection Plan; G

1.3 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary

environmental features associated with the project. 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 federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by law, the laboratories must be certified.

1.4 QUALITY ASSURANCE

1.4.1 Non-Compliance Notifications

The Contracting Officer 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 EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of work due to the fault or negligence of the Contractor allows for no adjustments to the contract for time extensions or equitable adjustments. In addition to a suspension of work, the Contracting Officer may use additional authorities under the contract or law.

1.5 ENVIRONMENTAL PROTECTION PLAN

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction. Incorporate construction related objectives and targets into the EPP. Include in the EPP measures for protecting natural and cultural resources, required reports, and other measures to be taken. Meet with the Contracting Officer or Contracting Officer Representative to discuss the EPP and develop a mutual understanding relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken. Submit the EPP within 15 days after Contractor award and not less than 10 days before the meeting. Revise the EPP throughout the project to include any reporting requirements, changes in site conditions, or contract modifications that change the project scope of work in a way that could have an environmental impact. No requirement in this section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain the current version onsite.

The EPP includes, but is not limited to, the following elements:

1.5.1 Clean Air Act Compliance

1.5.1.1 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local permits under the Clean Air Act. Determine requirements based on any current installation permits and the impacts of

the project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the project to the Contracting Officer. Ensure required permits are obtained prior to installing and operating applicable equipment/processes.

1.5.1.2 Compliant Materials

Provide the Government a list of SDSs for all hazardous materials proposed for use on site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet installation permit requirements for emissions.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 STORMWATER

3.1.1 Work Area Limits

Mark the areas that need not be disturbed under this Contract prior to commencing construction activities. Mark or fence isolated areas within the general work area that are not to be disturbed. Protect monuments and markers before construction operations commence. Personnel must be knowledgeable of the purpose for marking and protecting particular objects.

3.1.2 Contractor Facilities and Work Areas

Place field offices, staging areas, stockpile storage, and temporary buildings in areas designated on the drawings or as directed by the Contracting Officer. Move or relocate the Contractor facilities only when approved by the Government. Provide erosion and sediment controls for onsite borrow and spoil areas to prevent sediment from entering nearby waters. Control temporary excavation and embankments for plant or work areas to protect adjacent areas.

3.2 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management Section of the EPP. Obtain a copy of the Refuge's Pollution Prevention/Hazardous Waste Minimization Plan for reference material when preparing this part of the EPP. If no written plan exists, obtain information by contacting the Contracting Officer. Describe the anticipated types of the hazardous materials to be used in the construction when requesting information.

3.3 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with Contract Clause: "Cleaning Up". Unless otherwise instructed in writing by the Contracting Officer, remove traces 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 parking area and similar temporarily used areas to conform with surrounding contours.

-- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS
05/19, CHG 1: 08/21

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 As-Built Drawings

As-built drawings are the marked-up drawings, maintained by the Contractor on-site, that depict actual conditions and deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: contract modifications; official responses to submitted Requests for Information (RFI's); direction from the Contracting Officer; design that is the responsibility of the Contractor, and differing site conditions. Maintain the as-builts throughout construction as red-lined hard copies on site. These files serve as the basis for the creation of the record drawings.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals

As-Built Drawings; G

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 AS-BUILT DRAWINGS

Provide and maintain two black line print copies of the PDF contract drawings for As-Built Drawings. Maintain the as-builts throughout construction as red-lined hard copies on site. Submit As-Built Drawings 30 days prior to Beneficial Occupancy Date (BOD).

-- End of Section --

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SECTION 02 41 00

DEMOLITION
08/22

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.

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2014) Safety -- Safety and Health Requirements Manual

1.2 PROJECT DESCRIPTION

1.2.1 Definitions

1.2.1.1 Demolition

Demolition is the process of tearing apart and removing any feature of a facility together with any related handling and disposal operations.

1.2.1.2 Demolition Plan

Demolition Plan is the planned steps and processes for managing demolition activities and identifying the required sequencing activities and disposal mechanisms.

1.2.2 Demolition Plan

Prepare a Demolition Plan and submit proposed demolition, and removal procedures for approval before work is started.

1.2.3 General Requirements

Do not begin demolition or deconstruction until authorization is received from the Contracting Officer. The work of this section is to be performed in a manner that maximizes the value derived from the salvage and recycling of materials. Remove rubbish and debris from the project site; do not allow accumulations. The work includes demolition, and removal of resulting rubbish and debris. Remove rubbish and debris from Government property daily, unless otherwise directed. Store materials that cannot be removed daily in areas specified by the Contracting Officer. In the interest of occupational safety and health, perform the work in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections.

1.3 BURNING

The use of burning at the project site for the disposal of refuse and debris will not be permitted.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" or "S"

classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Demolition Plan; G

Existing Conditions

Inventory Of Signs To Be Removed And Reinstalled.

1.5 PROTECTION

1.6 EXISTING CONDITIONS

Before beginning any demolition or deconstruction work, survey the site and examine the drawings and specifications to determine the extent of the work. Record existing conditions in the presence of the Contracting Officer or the Contracting Officer's Representative showing the condition of structures and other facilities adjacent to areas of alteration or removal.

Prior to demolition, Contractor must provide the following:

a. Photo documentation of all trail signage.

b. A site plan annotating location of every existing sign.

c. Reinstallation plan for signs. Signs must be reinstalled in exact same spot as before.

d. Inventory Of Signs To Be Removed And Reinstalled.

Contractor to provide a drawing documenting existing signs. Signs should be reinstalled at same locations.

1.7 EXISTING PILE REMOVAL

Cut existing piles one foot below grade and cap with in situ soil. Existing layout would then need to be coordinated with layout of new piles. There should be a minimum of 1 foot spacing between the new and old piles.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

3.1 CLEANUP

Remove debris and rubbish from project site and similar excavations. Remove and transport the debris in a manner that prevents spillage on streets or adjacent areas. Apply local regulations regarding hauling and disposal.

3.2 DISPOSAL OF REMOVED MATERIALS

3.2.1 Regulation of Removed Materials

Dispose of debris, rubbish, scrap, and other nonsalvageable materials resulting from removal operations with all applicable federal, state and local regulations as contractually specified off the Government property.

3.2.2 Burning on Government Property

Burning of materials removed from demolished and deconstructed structures will not be permitted on Government property.

-- End of Section --

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SECTION 05 50 13

MISCELLANEOUS METAL FABRICATIONS
05/17, CHG 1: 08/18

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 INSTITUTE OF STEEL CONSTRUCTION (AISC)

AISC 303	(2016) Code of Standard Practice for Steel Buildings and Bridges

ASTM INTERNATIONAL (ASTM)

ASTM A123/A123M	(2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153/A153M	(2016a) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A653/A653M	(2022) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A924/A924M	(2022a) Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS (NAAMM)

NAAMM MBG 531	(2017) Metal Bar Grating Manual
NAAMM MBG 532	(2019) Heavy Duty Metal Bar Grating Manual

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Floor Gratings, Installation Drawings; G

SD-03 Product Data

Floor Gratings; G

1.3 MISCELLANEOUS REQUIREMENTS

1.3.1 Fabrication Drawings

Submit fabrication drawings showing layout(s), connections to structural system, and anchoring details as specified in AISC 303.

1.3.2 Installation Drawings

Submit templates, erection, and installation drawings indicating thickness, type, grade, class of metal, and dimensions. Show construction details, reinforcement, anchorage, and installation in relation to the building construction.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Gratings

a. Provide metal plank grating, non-slip requirement, steel in accordance with ASTM A653/A653M, Z275 G90.

b. Provide metal bar type grating in accordance with NAAMM MBG 531.

c. Grating to be standard duty welded, GW-100, 19-W-4, Rectangular bar, and smooth as indicated on drawings.

2.2 FABRICATION FINISHES

2.2.1 Galvanizing

Hot-dip galvanize items after fabrication. Provide galvanizing in accordance with ASTM A123/A123M, ASTM A153/A153M, ASTM A653/A653M or ASTM A924/A924M, Z275 G90.

2.3 FLOOR GRATINGS AND ROOF WALKWAYS

Design steel grating in accordance with NAAMM MBG 531 for bar type gratings, or in accordance with manufacturer's charts for plank grating. Galvanize steel floor gratings.

a. In accordance with NAAMM MBG 531, band edges of grating with bars of the same size as the bearing bars. Weld banding in accordance with the manufacturer's standard for trim unless otherwise indicated. Design tops of bearing bars, cross or intermediate bars to be in the same plane and to match grating finish.

b. NAAMM MBG 531, NAAMM MBG 532, band ends of gratings with bars of the same or greater thickness than the metal used for grating. Weld banding bars to bearing bars or channels at least every fourth bar or channel and in every corner. Tack weld intervening bars or channels. Band diagonal or round cuts by welding bars of the same or greater thickness as the grating and in accordance with the manufacturer's standard for trim unless otherwise indicated.

c. Provide slip resistant surface finishes.

PART 3 EXECUTION

Not Used

-- End of Section --

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SECTION 05 52 00

METAL RAILINGS
02/18, CHG 1: 02/20

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.

ASTM INTERNATIONAL (ASTM)

ASTM A53/A53M	(2022) Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless
ASTM A123/A123M	(2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

1.2 ADMINISTRATIVE REQUIREMENTS

Within 30 days of contract award, submit fabrication drawings to the Contracting Officer.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Fabrication Drawings; G

PART 2 PRODUCTS

2.1 FABRICATION

Provide OSHA Approved Handrails as indicated on Plans. Handrails should be provided with coordinated mounting system that allows for removal of handrails. Handrails are intended to be removed periodically throughout the year for maintenance.

2.1.1 Protective Coating

Provide hot-dipped galvanized steelwork as indicated in accordance with ASTM A123/A123M. Touch up abraded surfaces and cut ends of galvanized members with zinc-dust, zinc-oxide primer, or an approved galvanizing repair compound.

2.2 COMPONENTS

2.2.1 Handrail Mounts

Provide model D1535 as indicated on the drawings from EDGEFall Protection or approved equal.

2.2.2 Steel Railings And Handrails

Design handrails to resist a concentrated load of 200 lb in any direction at any point of the top of the rail or 50 lb per foot applied horizontally to the top of the rail, whichever is more severe.

2.2.2.1 Steel Handrails

Provide steel handrails, steel pipe conforming to ASTM A53/A53M Grade A or B of equivalent strength. Provide steel railings of 1 1/2 inch nominal size, hot-dip galvanized.

Galvanize exterior railings, including pipe, fittings, brackets, fasteners, and other ferrous metal components.

Provide galvanized railings, including pipe, fittings, brackets, fasteners, and other ferrous metal components.

Size of handrail tubing to coordinate with mounting hardware. Must be OSHA approved.

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 06 10 00

ROUGH CARPENTRY
08/16, CHG 2: 11/18

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 INSTITUTE OF TIMBER CONSTRUCTION (AITC)

AITC TCM	(2012) Timber Construction Manual, 5th Edition

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B18.6.1	(2016) Wood Screws (Inch Series)

AMERICAN WOOD COUNCIL (AWC)

AWC NDS	(2015) National Design Specification (NDS) for Wood Construction
AWC WFCM	(2012) Wood Frame Construction Manual for One- and Two-Family Dwellings

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)

AWPA BOOK	(2015) AWPA Book of Standards
AWPA M2	(2019) Standard for the Inspection of Preservative Treated Wood Products for Industrial Use
AWPA M6	(2013) Brands Used on Preservative Treated Materials
AWPA P5	(2015) Standard for Waterborne Preservatives
AWPA U1	(2022) Use Category System: User Specification for Treated Wood

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

APA EWS T300	(2007) Technical Note: Glulam Connection Details

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC	(2021) International Building Code

SOUTHERN PINE INSPECTION BUREAU (SPIB)

SPIB 1003	(2014) Standard Grading Rules for Southern

Pine Lumber

TRUSS PLATE INSTITUTE (TPI)

TPI 1	(2014) National Design Standard for Metal Plate Connected Wood Truss Construction, Including Commentary and Appendices

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Fasteners; G

SD-06 Test Reports

Preservative-treated Lumber and Plywood

SD-07 Certificates

Certificates of Grade

Preservative Treatment

1.3 DELIVERY AND STORAGE

Deliver materials to the site in an undamaged condition. Store, protect, handle, and install prefabricated structural elements in accordance with manufacturer's instructions and as specified. Store materials off the ground to provide proper ventilation, with drainage to avoid standing water, and protection against ground moisture and dampness. Store materials with a moisture barrier at both the ground level and as a cover forming a well ventilated enclosure. Store wood I-beams and glue-laminated beams and joists on edge. Adhere to requirements for stacking, lifting, bracing, cutting, notching, and special fastening requirements. Do not use materials that have visible moisture or biological growth. Remove defective and damaged materials and provide new materials. Store separated reusable wood waste convenient to cutting station and area of work.

1.4 GRADING AND MARKING

1.4.1 Lumber

Mark each piece of framing and board lumber or each bundle of small pieces of lumber with the grade mark of a recognized association or independent inspection agency. Such association or agency must be certified by the Board of Review, American Lumber Standards Committee, to grade the species used. Surfaces that are to be exposed to view must not bear grademarks, stamps, or any type of identifying mark. Hammer marking will be permitted on timbers when all surfaces will be exposed to view.

1.4.2 Preservative-Treated Lumber

The Contractor is responsible for the quality of treated wood products. Each treated piece must be inspected in accordance with AWPA M2 and permanently marked or branded, by the producer, in accordance with AWPA M6. The Contractor must provide Contracting Officer's Representative (COR) with the inspection report of an approved independent inspection agency that offered products comply with applicable AWPA Standards. The appropriate Quality Mark on each piece will be accepted, in lieu of inspection reports, as evidence of compliance with applicable AWPA treatment standards.

1.5 PRESERVATIVE TREATMENT

Treat wood products with waterborne wood preservatives conforming to AWPA P5. Pressure treatment of wood products must conform to the requirements of AWPA BOOK Use Category System Standards U1 and T1. Pressure-treated wood products must not contain arsenic, chromium, or other agents classified as carcinogenic, probably carcinogenic, or possibly carcinogenic to humans (compounds in Groups 1, 2A, or 2B) by the International Agency for Research on Cancer (IARC), Lyon, France. Pressure-treated wood products must not exceed the limits of the U.S. EPA's Toxic Characteristic Leaching Procedure (TCLP), and must not be classified as hazardous waste. Submit certification from treating plant stating chemicals and process used and net amount of preservatives retained are in conformance with specified standards. In accordance with AWPA U1 provide non-copper preservative treatment such as EL2, PTI or SBX,DOT for products in direct contact with sheet metal.

a. All wood to be pressure treated. Piles, pile caps, and longitudinal beams to be pressure treated to 2.5 pounds per cubic foot with a use category of US5C in accordance with AWPA. Decking and toe boards to be .25 pounds per cubic foot with a use category of UC3B in accordance with AWPA. Approved preservatives are ACZA or CCA. All wood must be air or kiln dried after treatment. Specific treatments must be verified by the report of an approved independent inspection agency, or the AWPA Quality Mark on each piece. Do not incise surfaces of lumber that will be exposed. Minimize cutting and avoid breathing sawdust. Brush coat areas that are cut or drilled after treatment with either the same preservative used in the treatment or with a 2 percent copper naphthenate solution. Provide submittal for bush on treatment. All lumber and woodwork must be preservative treated.

1.6 CERTIFICATIONS

1.6.1 Certified Wood Grades

Provide certificates of grade from the grading agency on graded but unmarked lumber or plywood attesting that materials meet the grade requirements specified herein.

1.7 INSPECTIONS

Owner's representative or engineer will be given the opportinity for a pilot hole inspection prior to completion of work.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Lumber and Timbers

Provide solid sawn lumber and timbers of stress-rated Southern Pine, Douglas Fir-Larch, or Red Pine with a stress rating as indicated, and identified by the grade mark of a recognized association or independent inspection agency using the specific grading requirements of an association recognized as covering the species used. The association or independent inspection agency must be certified by the Board of Review, American Lumber Standards Committee, to grade the species used. For secondary members use lumber or timbers rated No. 1 or better. Use commercial grade lumber for decking members.

2.2 LUMBER

2.2.1 Framing Lumber

Framing lumber as indicated in drawings must be one of the species listed in the table below. Minimum grade of species must be as listed.

Table of Grades for Framing and Board Lumber

Grading Rules	Species	Framing	Board Lumber
SPIB 1003 standard grading rules	Southern Pine	All Species: Standard Light Framing or No. 3 Structural Light Framing (Stud Grade for 2x4 nominal size, 10 feet and shorter)	No. 2 Boards

2.3 FASTENERS

Unless otherwise indicated or specified, rough hardware must be of the type and size necessary for the project requirements. Sizes, types, and spacing of fastenings of manufactured building materials must be as recommended by the product manufacturer unless otherwise indicated or specified. Reference paragraph 2.1.4. under specification section 06 13 33 for project hardware schedule.

2.3.1 Wood Screws

ASME B18.6.1.

Deck screws to be hot dipped galvanized, star bit. No thru penetration. Provide appropiate length for use.

2.3.2 Nails

Nails to be hot dipped galvanized, size and type best suited for purpose. Length of nails must be sufficient to extend 1 inch into supports. In general, 8-penny or larger nails must be used for nailing through 1 inch thick lumber and for toe nailing 2 inch thick lumber; 16-penny or larger nails must be used for nailing through 2 inch thick lumber. Nailing must be in accordance with the recommended nailing schedule contained in AWC WFCM. Where detailed nailing requirements are not specified, nail size and spacing must be sufficient to develop an adequate strength for the connection. The connection's strength must be verified against the nail capacity tables in AWC NDS. Reasonable judgment backed by experience must ensure that the designed connection will not cause the wood to split. If a load situation exceeds a reasonable limit for nails, a specialized connector must be used.

2.3.3 Timber Connectors

Unless otherwise specified, timber connectors must be in accordance with TPI 1, APA EWS T300 or AITC TCM.

PART 3 EXECUTION

3.1 INSTALLATION

Do not install building construction materials that show visual evidence of biological growth.

Select lumber sizes to minimize waste. Fit framing lumber and other rough carpentry, set accurately to the required lines and levels, and secure in place in a rigid manner. Do not splice framing members between bearing points. Set joists with their crown edge up. Provide adequate support as appropriate to the application, climate, and modulus of elasticity of the product. Reinforce all members damaged by such cutting or boring by means of specially formed and approved sheet metal or bar steel shapes, or remove and provide new, as approved. Provide as necessary for the proper completion of the work all framing members not indicated or specified. Spiking and nailing not indicated or specified otherwise must be in accordance with the Nailing Schedule contained in ICC IBC; perform bolting in an approved manner. Spikes, nails, and bolts must be drawn up tight. Timber connections and fastenings must conform to AWC NDS.

3.1.1 Joists (Longitudinal Beams)

Provide joists of the sizes and spacing indicated, accurately and in alignment, and of uniform width. Joists must have full bearing on beams; provide laps over bearing only and spike. Where joists are of insufficient length to produce a 12 inch lap, butt joists over bearing and provide wood scabs 2 nominal inches thick by depth of joists by 24 inches long or metal straps 1/4 by 1 1/2 inch by not less than 18 inches long nailed to each joist with not less than four 10-penny nails, or approved sheet metal connectors installed in accordance with the manufacturer's recommendations. Provide metal hangers for joists framing into the side of beams. The minimum joist end bearing must be 4 inches.

3.1.1.1 Hurricane Ties

For joists supported by the pile caps (wood beams spanning from pile to pile), provide galvanized 18-guage hurricane ties at every pile cap

location for every joist. Tie joists across the top of the beam. Form straps to lie flat across the top of the beam and twist at the ends to provide flat contact with the side of each joist. Nail each strap at each end with three 10-penny nails spaced 2 inches o.c., or per manufacturer's recommendation if more stringent.

3.2 MISCELLANEOUS

3.2.1 Wood Nailers, Edge Strips, Rails

Provide sizes and configurations indicated or specified and anchored securely to continuous construction.

3.2.2 Wood Blocking

Provide proper sizes and shapes at proper locations for the installation and attachment of wood and other finish materials, fixtures, equipment, and items indicated or specified.

-- End of Section --

SECTION 06 13 33

PIER TIMBERWORK
11/16, CHG 1: 08/17

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 WOOD PROTECTION ASSOCIATION (AWPA)

AWPA A3	(2015) Standard Method for Determining Penetration of Preservatives and Fire Retardants
AWPA M4	(2021) Standard for the Care of Preservative-Treated Wood Products
AWPA M6	(2013) Brands Used on Preservative Treated Materials
AWPA P5	(2015) Standard for Waterborne Preservatives
AWPA P34	(2014) Standard for Copper Naphthenate, Waterbone (CuN-W)
AWPA T1	(2022) Use Category System: Processing and Treatment Standard
AWPA U1	(2022) Use Category System: User Specification for Treated Wood

ASTM INTERNATIONAL (ASTM)

ASTM A123/A123M	(2017) Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A153/A153M	(2016a) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A307	(2021) Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
ASTM D1143/D1143M	(2007; R 2013) Piles Under Static Axial Compressive Load
ASTM D5643/D5643M	(2012) Standard Specification for Coal Tar Roof Cement, Asbestos Free

WESTERN WOOD PRESERVERS INSTITUTE (WWPI)

WWPI Mgt Practices	(1996; R 2011) Best Management Practices for the Use of Treated Wood in Aquatic and Wetland Environments

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Pier Timberwork; G

Submit drawings of treated timber showing dimensions of cut, framed, or bored timbers.

SD-06 Test Reports

Preservative Treatment - Pier Timberworks; G

The Contractor must provide the Contracting Officer's Representative (COR) with the inspection report of an independent inspection agency, approved by the Contracting Officer, that offered products comply with applicable AWPA standards.

SD-07 Certificates

SDS and CIS; G

Best Management Practices (BMPs); G

1.3 DELIVERY, STORAGE, AND HANDLING

Handle and store piles in accordance with AWPA M4. Follow precautions identified in SDS and CIS provided by the supplier of treated wood products.

Close-stack treated timber and lumber material in a manner that will prevent long timbers or preframed material from sagging or becoming crooked. Keep ground under and within 5 feet of such piles free of weeds, rubbish, and combustible materials. Protect materials from weather. Handle treated timber with ropes or chain slings without dropping, breaking outer fibers, bruising, or penetrating surface with tools. Do not use cant dogs, peaveys, hooks, or pike poles. Protect timber and hardware from damage.

1.4 QUALITY ASSURANCE

1.4.1 Preservative Treatment - Pier Timberworks

The Contractor must be responsible for the quality of treated wood products. The Contractor must provide the Contracting Officer's Representative (COR) with the inspection report of an independent inspection agency, approved by the Contracting Officer, certifying that the offered products comply with applicable AWPA standards. Identify treatment on each piece by the quality mark of an agency accredited by the Board of Review of the American Lumber

Standard Committee. Inspect all preservative-treated wood visually to ensure there are no excessive residual materials or preservative deposits. Material must be clean and dry or it will be rejected because of environmental concerns.

1.4.2 SDS and CIS

Provide Safety Data Sheets (SDS) and Consumer Information Sheets (CIS) associated with timber pile preservative treatment. Contractor must comply with all safety precautions indicated on SDS and CIS.

1.4.3 Driven Pile Load Testing

aload test should be performed to validate the allowable capacity on two piles (timber pile at the observation tower and one boardwalk post in the observation tower area). The Geotechnical Engineer should select the test pile locations. The load test should be performed using ASTM D1143/D1143M - Quick Method, with the pile loaded to minimum 250% of its design capacity. The load test reaction frame should be set - up by the pile contractor, and given the light design loads, might consist of marsh constuction equipment to provide the reaction and Terracon should perform the load test after minimum 14 days of set - up time. The test pile can be installed in a production pile location, if needed.

The contractor should select a driving hammer that can install the selected pilling without overstressing the pile material. The hammer should have a rated energy in feet or poundsat least equal to 15% of the design compressive load capacity in pounds. The contractor should submit the pile driving plan and the pile hammer to the engineer for evaluation of the driving stresses in advance of pile installation.

in general, timber piles should be installed using a conventional air driven or drop weight pile hammer with a maximum energy rating of about 7,500 ft - lbfor Class 5 timber piles. However, for this project the use of alternate hammers and / or vibratory pile hammers could be considered. Consideration could also be given to an air pile hammerdelivering between 200 and 1,000 ft - lbs of energy since low resistance to driving is anticipated and these hammers could be equipped on small and / or low ground bearing pressure marsh equipment. The Geotechnical Enineer should evaluate any refusal or very low resistance of the piles during the pile driving operations.

The Geotechnical Engineer (or others under their direction) should observe and document the pile installation process including soil and groundwater conditions observed, consistency with expected conditions and details of the installed pile.

1.4.4 Best Management Practices (BMPs)

The producer of the treated wood products must provide certification that WWPI Mgt Practices for the use of Treated Wood in Aquatic and Wetland Environments were utilized including a written description and appropriate documentation of the BMPs utilized.

As part of the BMPs for CCA treated pier timberwork, certification must be provided that documents that the Chromotropic Acid Test (AWPA A3- Methods for Determination of the Presence of Hexavalent Chromium in Treated Wood)

was performed on the timber and adequate fixation of the CCA treatment has been achieved prior to installation.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Lumber and Timbers

Provide solid sawn lumber and timbers of stress-rated Southern Pine with a stress rating as indicated, and identified by the grade mark of a recognized association or independent inspection agency using the specific grading requirements of an association recognized as covering the species used. The association or independent inspection agency must be certified by the Board of Review, American Lumber Standards Committee, to grade the species used. Use commercial grade lumber for decking members.

2.1.2 Preservative Treatment

Fabricate lumber and timbers before preservative treatment. Each piece of treated lumber or timber must be branded, by the producer, in accordance with AWPA M6. The type of preservative, retention, and penetration must be based on Use Category and species and in accordance with AWPA U1 and AWPA T1. The Contractor must be responsible for the quality of treated wood products.

For wood in contact with brackish water, salt water, or saltwater splash, lumber and timber preservative treatment must be Waterborne preservative in accordance with AWPA P5 (ACZA - Ammoniacal Copper Zinc Arsenate, CCA - Chromated Copper Arsenate).

For wood not in contact with brackish water, salt water, or salt water splash, treatment must be in accordance with AWPA U1 Commodity Specification A: Sawn Products with water-borne preservative (AWPA P5). Piles, pile caps, and longitudinal beams to be pressure treated to 2.5 pounds per cubic foot with a use Category of US5C in accordance with AWPA.

2.1.3 Field Treatment

Piles must be field treated in accordance with AWPA M4. All cuts, holes and injuries such as holes from removal of spikes or nails which may penetrate the treated zone must be field treated with copper naphthenate conforming to AWPA P34.

2.1.4 Hardware

Pile hardware must consisting of bolts with necessary nuts and washers, timber connectors, drift pins, dowels, nails, screws, spikes, and other fastenings. Bolts and nuts must conform to ASTM A307. Provide cast-iron ogee, malleable iron washers, or plate or cut washers where indicated. Provide bolts with washers under nut and head. Provide timber connectors and other metal fastenings of type and size indicated. Hot-dip galvanize all hardware specified or indicated in accordance with ASTM A123/A123M or ASTM A153/A153M, as applicable.

PART 3 EXECUTION

3.1 INSTALLATION

Cut, bevel, and face timbers prior to plant preservative treatment. In addition to the contract clause entitled "Accident Prevention" provide protective equipment for personnel fabricating, field treating, or handling materials treated with creosote or water-borne salts. Refer to paragraph SDS AND CIS.

The existing boardwalk will be demolished and replaced. If the existing pile foundations are to removed (pulled out of the ground), then the resulting void should be backfilled with grout. Alternatively, the esisting piles could be cut about one foot below grade and capped with clay soils. If the piles are cut below grade, consideration should be gicen to the layout of the new piles to ensure that there are no conflicts and that suffincient spacing (about minimum 1 foot) is provided between the abandoned piles, and the new piles.

3.1.1 Framing

Cut and frame lumber and timber so that longitudinal beams will fit over contact surface. Secure timbers and piles in alignment. Open joints are unacceptable. Shimming is not allowed. Drill holes for drift pins and dowels with a bit 1/16 inch less in diameter than the pin or dowel. Drill holes for bolts with a bit 1/16 inch larger in diameter than rod or bolt. Drill holes for lag screws in two parts. Make lead hole for shank the same diameter as shank. Make lead hole for the threaded portion approximately two-thirds of the shank diameter.

3.1.2 Bracing

Align bents before bracing is placed. Provide bracing of sufficient length to provide a minimum distance of 8 inches between outside bolt and end of brace. Bracing bear firmly against piles or timber to which secured. Place fillers to avoid bending the bracing more than 1 inch out of line when bracing bolts or other fastenings are drawn up tight. Built-up fillers will not be permitted. Make filler a single piece of the same treated lumber as that in the brace, with a width of at least 6 inches and a length of at least 12 inches. Bolt ends of bracing through pile, with a bolt of at least 1 inch diameter.

3.1.3 Longitudinal Beams

Place crown up and, if possible, the better edge down. Tops must not vary from a plane more than will permit bearing deck boards. Stringers may be of sufficient length to cover two spans, except on sharp horizontal curves. Between longitudinal beams, frame and toenail cross-bridging or solid-bridging at each end with at least two nails for cross-bridging and four nails for solid-bridging. Make size and spacing of bridging as indicated.

3.1.4 Decking

Make decking of a single thickness of plank supported by longitudinal beams . Unless otherwise indicated, lay plank with heart side down and with tight joints.

3.2 FIELD TREATMENT

3.2.1 Pier timberwork

Field treat all cuts, holes, bevels, notches, refacing, abrasions, and injuries such as abrasions or holes from removal of spikes or nails made in the field in treated piles or timbers in accordance with AWPA M4, SDS and CIS. Trim cuts and abrasions before field treatment. Depressions or openings around bolt holes, joints, or gaps including recesses formed by counterboring must be field treated with copper naphthenate conforming to AWPA P34; and after bolt or screw is in place, fill with coal-tar roofing cement conforming to ASTM D5643/D5643M.

3.2.2 Piling and Post Protection

After driving is completed, all piles must be "headed" or cut off normal at the cutoff elevation. Headed treated piles, including those to be capped with concrete, must be treated with copper naphthenate per AWPA M4. Piles driven in locations where they are constantly subject to water spray must be given this treatment immediately after they are cut off and before the cutoff surface has been wetted. Seal ends with a heavy application of appropriate sealer.

Cutoffs must become the property of the Contractor and must be removed at his expense.

-- End of Section --

SECTION 12 93 00

SITE FURNISHINGS
08/17, CHG 1: 08/18

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.

ASTM INTERNATIONAL (ASTM)

ASTM A153/A153M	(2016a) Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM A307	(2021) Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
ASTM D2990	(2017) Standard Test Methods for Tensile, Compressive, and Flexural Creep and Creep-Rupture of Plastics

1.2 SUBMITTALS

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Benches and Chairs; G

SD-03 Product Data

Benches and Chairs

SD-04 Samples

Finish; G

PART 2 PRODUCTS

2.1 MATERIALS

Provide materials which are the standard products of a manufacturer regularly engaged in the manufacture of such products. Provide materials with proven satisfactory usage for at least 2 years.

2.1.1 Anchors and Hardware

Provide anchors, where necessary, for fastening site furnishings securely in place and in accordance with approved manufacturer's instructions.

Anchoring devices that may be used, when no anchors are otherwise specified or indicated, include anchor bolts, slotted inserts, expansion shields for concrete; toggle bolts and through bolts for masonry; machine carriage bolts for steel; and lag bolts and screws for wood. Anchor bolts must conform to ASTM A307. Hardware must be stainless steel in accordance with ASTM A153/A153M and compatible with the material to which applied. All exposed hardware must match in color and finish. Mounting hardware must be concealed, recessed, and plugged.

2.1.2 Plastics

Provide High Density Polyethylene (HDPE) Components with a minimum of 90 percent total recycled content. Provide data identifying percentage of recycled content for HDPE components. Recycled materials must be constructed or manufactured with a maximum 1/4 inch deflection or creep in any member in conformance with ASTM D2990. Provide panels and components molded of ultraviolet (UV) and color stabilized polyethylene, with minimum 1/4 inch wall thickness; exposed edges must be smoothed, rounded, and free of burrs and points; and the material must be resistant to fading, cracking, fogging, and shattering. The material must be non-toxic and have no discernible contaminates such as paper, foil, or wood. The material must contain no more than 3 percent air voids and be resistant to deformation from solar radiation heat gain. Recycled materials to include plastic lumber will not be used as structural components of site furnishings. Submit a report of site furnishing parts consisting of recycled materials. Product specification data, providing test information for deflection and creep in accordance with ASTM D2990 for site furnishings which use plastic lumber as a component, must be submitted. Provide data for comparison of deflection and creep measurements to other comparable materials.

2.2 COATINGS AND FINISHES

2.2.1 Finish

Finish must be as specified by the manufacturer or as indicated. Exposed surfaces and edges must be rounded, polished, or sanded. Finish must be non-toxic, non-glare, and resistant to corrosion. Exposed surfaces must be smooth and splinter-free exposed surfaces. Submit two sets of color data for each furnishing displaying manufacturer's color selections and finishes, and identifying those colors and finishes proposed for use.

2.3 BENCHES AND CHAIRS

Provide a total of (12) benches for project as indicated on plans. Pilot Rock model RBB-6. Product data and shop drawings required. Color samples and Options must be submitted for approval prior to fabrication/purchasing.

PART 3 EXECUTION

Not Used

-- End of Section --