SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 33 16.00 10

DESIGN DATA (DESIGN AFTER AWARD)

PART 1 GENERAL

1.1 SUMMARY
1.2 REFERENCES
1.2.1 Manuals, Codes, and Criteria
1.3 DEFINITIONS
1.3.1 Backcheck
1.3.2 Design Commitment
1.3.3 Designer of Record (DOR)
1.3.4 Standard of Care
1.3.5 USACE CAD/BIM Technology Center
1.4 ORDER OF PRECEDENCE
1.5 PRECONSTRUCTION ACTIVITIES
1.5.1 Design Quality Control Plan
1.5.2 Meetings and Conferences
1.5.2.1 Post Award Conference
1.5.2.2 Initial Design Conference
1.5.2.3 Pre-Construction Conference
1.6 SUBMITTALS
1.7 DELIVERY, STORAGE, AND HANDLING
1.7.1 Electronic Design Submittal
1.7.1.1 Malicious Content
1.7.2 CAD File Packaging
1.7.2.1 Autodesk Civil3D
1.7.3 PDF File Packaging
1.7.3.1 Bookmarking
1.7.4 Hardcopy Design Submittal

PART 2 PRODUCTS

2.1 GOVERNMENT FURNISHED MATERIALS
2.1.1 GFM Handover
2.1.2 GFM File Formats
2.1.2.1 Government Furnished CAD
2.1.2.2 Government Furnished GIS
2.1.3 Modeling Completion and Quality
2.1.4 Data Loss, Corruption, and Error
2.2 MODELING DOCUMENTS
2.2.1 Submitted Files List
2.2.2 Modeling Electronic Files
2.2.2.1 Quality Control (QC) Reports
2.2.2.1.1 Graphics Standards Checks and Report
2.2.2.1.2 CAD Standards Checks and Report
2.2.3 Modeling Re-Submittals
2.3 DESIGN DRAWINGS
2.3.1 Electronic Drawing Files

2.3.2 Drawing Index
2.3.3 Shop Drawings Used as Design Drawings
2.3.3.1 Drawing Format For Shop Drawings Used as Design Drawings
2.3.3.2 Identification of Shop Drawings Used as Design Drawings
2.3.4 Seal on Documents
2.4 SPECIFICATIONS
2.4.1 Specifications Format
2.4.2 Identification of Manufacturer's Product Data Used as Specifications.
2.4.3 Specifications Packaging
2.4.4 Specification Deliverable
2.5 DESIGN DOCUMENTATION REPORT
2.5.1 Design Requirements and Provisions
2.5.1.1 Civil
2.5.1.2 Environmental
2.5.2 Operations and Maintenance (O&M) Provisions
2.5.3 Design Documentation Report Packaging
2.5.3.1 Assembly and Identification
2.5.4 Calculations
2.5.5 Engineering Considerations and Instructions for Field Personnel (ECIFP)

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS
3.2 DESIGN REVIEW
3.2.1 Design Quality Control Review
3.2.2 Independent Technical Review (ITR) - FOR INFORMATION ONLY
3.2.3 Government Conformance Review
3.3 DESIGN SUBMITTALS PHASES
3.3.1 Interim Design Submittal
3.3.1.1 Interim Design Development Management
3.3.1.2 Fast-Tracking
3.3.1.3 Over-the-Shoulder Progress Review
3.3.2 Final Design Submissions
3.3.3 Design Complete Submittals
3.4 DESIGN PLATFORM AND FILE FORMATS
3.4.1 CAD
3.4.1.1 Native CAD Authoring Content
3.4.1.2 CAD Coordinate System
3.5 MODELING REQUIREMENTS
3.5.1 CAD Modeling Requirements
3.5.1.1 Graphics and Layer Standards
3.5.2 GIS
3.5.2.1 Minimum Modeling Requirements
3.5.2.2 GIS Coordinate System
3.5.3 CAD
3.6 DESIGN CONFIGURATION MANAGEMENT (DCM)
3.6.1 Procedures
3.6.2 Tracking Design Review Comments
3.6.2.1 DrChecks Initial Account Set-Up
3.6.2.2 DrChecks Review Comments
3.7 DISCIPLINE DESIGN REQUIREMENTS
3.7.1 Geotechnical Considerations
3.7.1.1 Trench Backfill and Compaction Requirements
3.7.1.2 Minimum Testing Requirements
3.7.2 Land Survey
3.7.2.1 Post-Construction Survey
3.7.3 Civil Site and Utilities Design Contents

3.7.3.1 Specific Civil Design Requirements
3.8 DESIGN MATURITY
3.9 INTERIM DESIGN REQUIREMENTS
3.9.1 Interim Design Document Requirements
3.9.1.1 Interim Design Drawings
3.9.1.2 Interim Specifications
3.9.1.3 Interim Design Documentation Report
3.9.2 Submission Review
3.9.3 Interim Review Conference
3.9.4 Review Conference Documentation
3.9.4.1 Minutes and Comment Process
3.9.4.2 Availability
3.10 FINAL DESIGN REQUIREMENTS
3.10.1 Design Drawings
3.10.1.1 Geo-Referenced Data
3.10.2 Design Documentation Report
3.10.3 Specifications
3.10.4 Submittal Register
3.11 CORRECTED FINAL DESIGN REQUIREMENTS
3.11.1 Design Drawings
3.11.2 Design Documentation Report
3.11.3 Specifications
3.11.4 Submittal Register
3.12 DESIGN COMPLETE CONSTRUCTION DOCUMENT REQUIREMENTS
3.13 ACCEPTANCE AND RELEASE FOR CONSTRUCTION
3.14 DESIGNER RESPONSIBILITIES DURING CONSTRUCTION

-- End of Section Table of Contents --

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01 33 16.00 10

DESIGN DATA (DESIGN AFTER AWARD)

PART 1 GENERAL

1.1 SUMMARY

After award, develop the accepted proposal into the completed design, as described herein. Use a collaborative, integrated design process for all stages of project delivery with comprehensive performance goals for site development, water, and waste diversion. Ensure incorporation of these goals in project delivery. Consider all stages of the project lifecycle, including material acquisition, construction, and operations and maintenance.

1.2 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 WATER WORKS ASSOCIATION (AWWA)

AWWA C600	(2023) Installation of Ductile-Iron Mains and Their Appurtenances
AWWA M41	(2009; 3rd Ed) Ductile-Iron Pipe and Fittings

ASTM INTERNATIONAL (ASTM)

ASTM D422	(1963; R 2007; E 2014; E 2014) Particle-Size Analysis of Soils
ASTM D1140	(2017) Standard Test Methods for Determining the Amount of Material Finer than 75-µm (No. 200) Sieve in Soils by Washing
ASTM D1557	(2012; E 2015) Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft3) (2700 kN-m/m3)
ASTM D2216	(2019) Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D4318	(2017; E 2018) Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 19005-3	(2012) Document Management -- Electronic

	Document File Format for Long-Term Preservation -- Part 3: Use of ISO 32000-1 with Support for Embedded Files (PDF/A-3)
ISO 32000-1	(2008) Document Management -- Portable Document Format -- Part 1: PDF 1.7

NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCDEQ)

NCDEQ PWS	(2022)Rules Governing Public Water Systems, from the North Carolina Administrative Code, Title 15A, Subchapter 18C, Sections .0100 though .2200

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT)

NCDOT RSD	(2024) Roadway Standard Drawings
NCDOT SSRS	(2021) Standard Specifications for Roads and Structures

TOWN OF WEAVERVILLE, NORTH CAROLINA (WVR-NC)

Weaverville Code	(2026) Code of Ordinances Town of Weaverville, North Carolina
Weaverville Standards	(2017; Revision, 2018) Water Department, Standard Details for Construction

U.S. ARMY CORPS OF ENGINEERS (USACE)

ECB 2023-9	(2023; Revision 1, 2025) Civil Works Design Milestone Checklists
EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements
EM 1110-1-1002	(2012) Survey Markers and Monumentations
EM 1110-1-2909	(2012) Engineering and Design -- Geospatial Data and Systems
ER 415-1-10	(2012) Construction Contractor Submittal Procedures
ER 1110-1-8159	(2015) Engineering and Design DRCHECKS
ER 1110-2-1150	(1999) Engineering and Design for Civil Works Projects
ER 1110-3-12	(2025) Quality Management
ER 1110-345-700	(2026) Design Analysis, Drawings, Specifications, and Minimum Submittal Requirements
ER 1165-2-217	(2025) Civil Works Quality and Review Policy

ERDC/ITL SR-23-1 (2023) A/E/C Graphics Standard, Release 2.2

ERDC/ITL SR-24-3 (2024) A/E/C CAD Standard - Release 6.2

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-201-01 (2022) Civil Engineering

UFC 3-230-01 (2018; Change 3, 2021) Water Storage and Distribution

UFS 1-300-02 (2025) Unified Facilities Guide Specifications (UFGS) Format Standard

1.2.1 Manuals, Codes, and Criteria

Adhere to the following design manuals, codes, and criteria for design of the project. Omission of an applicable reference from the list does not relieve the Contractor from adhering to it if required by local, state, or federal regulations. Adhere to the more stringent between stated requirements and industry best practices for design, construction, and quality control testing and reporting. The Designer of Record is responsible for determining the more stringent standards. Determinations between standards must be documented in the design documentation report outlined later in this section.

Design Quality Management and Control:

ER 1110-1-8159

ER 1110-3-12

ER 1165-2-217

Design Submittals:

ECB 2023-9

ER 415-1-10

ER 1110-2-1150, Appendix D

ER 1110-345-700

ERDC/ITL SR-23-1

ERDC/ITL SR-24-3

UFS 1-300-02

Civil Site Engineering:

UFC 3-201-01

UFC 3-230-01

AWWA Standards applicable to Ductile Iron Pipe, including but not limited to AWWA C600 and AWWA M41

North Carolina and Weaverville Specific:

NCDEQ PWS

NCDOT RSD

NCDOT SSRS

Weaverville Code

Weaverville Standards

1.3 DEFINITIONS

1.3.1 Backcheck

The portion of a design review where reviewers check the designers' review comment evaluations and certify that the response is valid, addresses or resolves the concern from the comment, and incorporates the resolution into the next design submittal. For example, if a commenter leaves an initial comment that "fire hydrant spacing does not meet town code requirements, update design to reflect requirement"; after reviewing the code and making changes to the plans, the designer may respond, "concur; per Town code, fire hydrants are required to be no more than XXX feet apart; drawing C-10X, C-10X, and C-10X have been updated to decrease the space between fire hydrants"; after the next design submittal is sent, the reviewer will backcheck that the revision has been incorporated, and after verifying that the requirement is now being met may close the comment and respond, "Updated design meets fire hydrant spacing requirements".

1.3.2 Design Commitment

Decisions during the design phase of the project which represent a narrowing of the scope or the specifying of a design direction that will inform and restrict further design efforts and future decisions. The iterative design process and key design decisions must be thoroughly and clearly documented. Incremental design commitment must be conducted such that compliance with project requirements and design criteria are ensured prior to engaging the Government to affirm compliance. Ensure design commitment is communicated clearly and concisely both within the Design-Build team and with the Government. Formal design commitment will occur at the design reviews defined in this Specification Section.

1.3.3 Designer of Record (DOR)

Professional Registered members of the Contractor’s Design-Build team that check, approve, sign, date, and certify, prior to submitting the deliverables to the Government, that the D-B design submittals comply with the contract requirements.

The DORs stamp, sign, and date each design drawing and other design deliverables under their responsible discipline at each design submittal stage. The DOR(s) are responsible for maintaining the integrity of the design and for compliance with the contract requirements through construction and documentation of the as-built condition by coordination, review and approval of extensions of design, material, equipment and other construction submittals, review and approval or disapproval of requested deviations to the accepted design or to the contract, coordination with the Government of the above activities, and by performing other typical

professional design responsibilities.

As the professional with technical responsibility for the design, the Designer of Record must maintain the authority to direct design decisions that are in the best interest of the Government from a quality perspective. The Designer of Record cannot be directed to compromise their professional ethics for the project.

1.3.4 Standard of Care

The professional quality and level of detail to which Contract deliverables are held, this includes expectations for preliminary data collection and the appropriateness of certain assumptions that are based on project complexity and Government expectations for the project and its deliverables. A standard of care that would be considered the minimally accepted standard for the industry is not considered appropriate for this work. The Design-Build team will be held to average industry standards at a minimum unless more stringent requirements are defined further in the Contract Documents. The Design-Build team will also be held to all applicable Federal, State, and Local regulations and criteria whether referenced in the Contract Documents or not.

1.3.5 USACE CAD/BIM Technology Center

The USACE CAD/BIM Technology Center hosts all standard content for USACE. This content can be accessed through the CAD/BIM Technology Center website, https://cadbimcenter.erdc.dren.mil/.

1.4 ORDER OF PRECEDENCE

In the event of a conflict or inconsistency between any of the requirements within the Contract, precedence is applied:

a. Any portions of the accepted proposal which both conform to and exceed the requirements of the solicitation.

b. The provisions of the solicitation.

c. All other provisions of the accepted proposal.

d. Any design products including, but not limited to, plans, specifications, engineering studies and analyses, shop drawings, and equipment installation drawings. These are "deliverables" under the contract are not part of the contract itself. Design products must conform to all provisions of the contract, in the order of precedence.

1.5 PRECONSTRUCTION ACTIVITIES

1.5.1 Design Quality Control Plan

Submit a Design Quality Control Plan in accordance with Section 01 45 00 QUALITY CONTROL before design may proceed.

1.5.2 Meetings and Conferences

1.5.2.1 Post Award Conference

After Award of the contract but prior to Notice to Proceed (NTP) or commencement of any design or construction work, the Contractor shall meet

with the Contracting Officer at a Post-Award Conference. The purpose of the conference is to acquaint the Contractor with the United States Army Corps of Engineers administrative policy, to give emphasis to certain contract requirements considered unique or distinctive and to introduce personnel who will be representing the Contractor and the USACE Resident Office. The Post Award Conference attempts to address significant elements of administering the contract in sufficient detail to permit all parties to fully understand what is expected of them; to reach an understanding of the scope and conditions of the work; and to outline the authorities of all personnel involved in the work. A comprehensive conference does much to minimize many misunderstandings that might otherwise subsequently occur and facilitates the performance of the work. Major subcontractors who will engage in the work shall also attend. The Government will set the date and location for the Post Award Conference, establish the agenda, and provide meeting minutes. The Contractor should expect the Post Award Conference to take no less than 4 hours and no more than 8 hours.

The Government will conduct the Post Award Conference virtually, as soon as possible after Contract award, coordinated with issuance of the notice to proceed (NTP). Participation by the Contractor and major subcontractor representatives is mandatory. All designers need not attend this first meeting. The government will provide an agenda, meeting goals, meeting place, and meeting time to participants prior to the meeting.

As a minimum the following will be addressed during the conference: determination and introduction of contact person and their authorities; contract administration requirements; discussion of expected project progress processes; and coordination of subsequent meeting.

a. The government will introduce the Government project delivery team members, facility users, facility command representatives, and installation representatives.

b. Introduce key personal, major subcontractors and other needed staff.

c. Define expectations and duties of each participant.

d. Develop a meeting roster with complete contact information including name, office, project role, phone, mailing and physical address, and e-mail address for distribution to all participants. Also, provide minutes of the meeting to all participants.

1.5.2.2 Initial Design Conference

Within 14 day after acceptance of the Design Quality Control Plan, conduct the initial design conference also called a "Design Charette", and provide a record of the meeting. All Designers of Record and representatives from each phase of the project must participate in the conference. The primary purpose of the meeting is to make sure any needs are assigned and due dates established, as well as points of contact identified. Schedule and conduct the initial design conference at the project location in the town of Weaverville, NC, prior to initiation of significant preliminary design development, although it is recommended that the partnering process be initiated at the time of or before the initial design conference. Work with the Contracting Officer to coordinate a meeting room with the Town. Limit any design work conducted after award and prior to this conference; all design work during this time is performed at the Contractor's own risk.

Provide an agenda, as well as meeting time and goals, to the Contracting

Officer at least 10 days prior to the meeting. Conference goals shall include production of the following items prior to adjourning the meeting to assure all participants agree with the Contractor's intended design direction:

a. Document outlining investigations and analyses that must be completed prior to or concurrent with design work beginning, as well as describing permitting that will likely be required for the project and probable timelines for obtaining said permits.

b. Marked-up plan or drawing that displays the proposed alignment along with clarifications issued during the conference.

c. Document conveying a clear list of action items for team members, specific features of work that may require additional coordination with the Government.

Prepare meeting minutes, including drawings developed during the meeting, in Word or equivalent format within 14 days after the initial design conference. Provide minutes to all conference participants by e-mail. Additionally, include meeting minutes in the Design Documentation Report for record.

1.5.2.3 Pre-Construction Conference

Before starting any construction activities, jointly conduct an administrative conference with the Government to discuss any outstanding requirements and to review local installation requirements. It is possible there will be multiple Pre-Construction Conferences based on the configuration of the design packages. Provide minutes of the meeting(s) to all participants.

1.6 SUBMITTALS

Each submittal includes an associated approval level designation as defined in the following table:

Approval Level Designation	Definition
G	Government approval
no designation	for information only
D	Designer of Record approval
C	Government Conformance Review of Design
R	Designer of Record Approval and Government Conformance Review
A	Designer of Record Approval and Government Approval

Refer to ER 415-1-10 and Specification Section 01 33 00 SUBMITTAL PROCEDURES for descriptions of each designation. When used, a designation following the approval level designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Initial Design Conference

DCM Procedures; G

Data Management Plan; G

SD-05 Design Data

Interim Design Submittal; R

Review Conference Documentation

Final Design Submittal; R

Corrected Final Design Submittal; C

Design Complete Documents; C

1.7 DELIVERY, STORAGE, AND HANDLING

1.7.1 Electronic Design Submittal

Provide electronic files for each submittal required as indicated in Section 01 33 00 SUBMITTAL PROCEDURES .

1.7.1.1 Malicious Content

Scan all electronic files for malicious viruses using commercially available scanning program that is routinely updated to identify and remove current virus threats.

1.7.2 CAD File Packaging

Execute the following actions for all design drawing and modeling files:

1.7.2.1 Autodesk Civil3D

a. Use command "PURGE" to remove unused blocks, layers, styles, and other elements from the file.

b. Use command "AUDIT" to detect and remove errors from the file.

c. Use command "COMPRESS" to reduce file size for easier transfer.

1.7.3 PDF File Packaging

Utilize PDF file format in accordance with ISO 32000-1 and ISO 19005-3. Provide files from original sources, text-searchable, and saved in "Standard" (uncompressed) resolution whenever possible.

1.7.3.1 Bookmarking

a. Bookmark drawing submittal PDF sets to include one Parent Bookmark per Discipline and one Child Bookmark per sheet within each Discipline. Format Parent Bookmarks as "Discipline" (e.g. Architectural). Format Child Bookmarks as "Sheet ID Sheet Title" (e.g. A-101 First Floor Plan).

b. Bookmark specification submittal PDF sets using the SpecsIntact Print Processing PDF Print/Publish feature, combining processed sections into one PDF document. Insert the Submittal Register into the file where specified by Section 01 33 00 SUBMITTAL PROCEDURES and bookmark.

c. Bookmark design analysis and calculation submittal PDF sets to include one Parent Bookmark per design analysis section and one Child Bookmark per major paragraph per section. Format Parent Bookmarks as "Section" (e.g. Architectural). Format Child Bookmarks as "major paragraph designation Sheet Title" (e.g. 2.1 Primary Facility Functions).

1.7.4 Hardcopy Design Submittal

Design submittals may be required in electronic and hardcopy format for this project. Print hard copy submittals directly from the electronically packaged PDF files. Provide quantities and sizes as indicated in Section 01 33 00 SUBMITTAL REQUIREMENTS.

The Designer(s) of Record stamps and signs the original full size hard copy sheets as Released For Construction. Provide distribution from this set.

PART 2 PRODUCTS

2.1 GOVERNMENT FURNISHED MATERIALS

The Government may provide CAD files as government furnished materials (GFM) for use in design development. Government provided CAD files are presented as for information only. If the Contractor uses them as the basis for their own CAD files, substantive rework may be required to bring them into compliance for the design. Develop and maintain the information and level of detail contained in the GFM in the Project design, as required by this Contract.

Prepare CAD files in the formats prescribed as a basis for design, design drawings, and interim design submittals. Maintain the same or greater level of detail, properties, and functionality as is prescribed in this specification. Utilize the CAD templates retrieved from the USACE CAD/BIM Technology Center. At a minimum, the CAD files developed for this project must utilize the layers (including but not limited to color, line weights, line styles, and screening), blocks, and styles must be those dictated in ERDC/ITL SR-23-1, ERDC/ITL SR-24-3, and the templates from the CAD/BIM Technology Center. The DOR is encouraged to use engineering judgment in creating a neat, clear, and complete set of plans for the design submittals and minor deviations from the USACE CAD standards may be allowed by the Contracting Officer to that end.

2.1.1 GFM Handover

The Government will provide the GFM at no later than the initial design conference.

2.1.2 GFM File Formats

GFM are provided in the following file formats:

2.1.2.1 Government Furnished CAD

The GFM includes Autodesk Civil 3D 2023 .DWG files.

2.1.2.2 Government Furnished GIS

The Town of Weaverville's most current GIS Database may be furnished, including features and attributes relating to the current project, upon request after award. The Town reserves the right to provide or refuse provision of GIS data at the discretion of the Town Manager. Handling and protection of the data is subject to Town requirements. Documentation of the required attributes and schema definitions will be provided with the GIS Template.

GIS source data and product data remain the property of the US Government and the Town of Weaverville. Submit a data management plan before the initial design conference explaining and demonstrating the company's process for handling all geospatial data, including but not limited to geometry, attributes, metadata, topologies, and relational database schemas and operations used in association with this contract. Obtain further information about security and potential non-disclosure requirements from the Contracting Officer. The Government retains the authority to impose final disposition requirements for the GIS data based on Federal, State, or local requirements.

2.1.3 Modeling Completion and Quality

The Government makes no guarantee that the GIS data, CAD files, and utility data provide the level of completeness or quality required for a submittal. Develop or update files and data to completely and correctly represent the as-built conditions of the facility and the site.

However, use of any Government Furnished CAD files for creation of contract submittals is at the Contractor's own risk. Use of GIS data for precise location of utilities in design submittals is prohibited. Utility location shown in the design drawings must be based on accurately surveyed points. See DISCIPLINE DESIGN REQUIREMENTS below for surveying and civil requirements. Any quality control issues discovered in the GFM do not absolve the Contractor from submitting contract compliant deliverables as described in this and other specifications.

2.1.4 Data Loss, Corruption, and Error

Use of GFM files is at the Contractor's risk. Verify data integrity upon receipt and request a replacement if necessary.

Any adjustment of file structure, format, or software version required to make GFM compatible with computer systems and/or software is the responsibility of the Contractor.

2.2 MODELING DOCUMENTS

Provide all of the following documents with each design submittal.

2.2.1 Submitted Files List

Provide list of all submitted electronic files including a description, directory, and file name for each file submitted. Identify which files have been produced from the Model and Facility Data. For all Sheet files,

include a list of the sheet titles and sheet numbers.

2.2.2 Modeling Electronic Files

Include all Modeling files associated with the contract scope of work.

2.2.2.1 Quality Control (QC) Reports

As a minimum, include the following reports:

2.2.2.1.1 Graphics Standards Checks and Report

Provide QC checks on all graphic deliverables demonstrating that the fonts, dimensions, symbology and other construction document formatting are compliant with the requirements of this specification. Identify and report non-compliant content.

2.2.2.1.2 CAD Standards Checks and Report

Provide QC checks on CAD Output demonstrating that filenames, sheet borders, layer/level names, and symbology are compliant with the requirements of this specification. Identify and report non-compliant content.

2.2.3 Modeling Re-Submittals

If components of a Modeling submittal are rejected, provide the following for each Modeling Re-Submittal, in addition to re-submittal information required by Section 01 33 00 SUBMITTAL PROCEDURES:

a. Re-submit all components required under paragraph MODELING PACKAGE, including a new Modeling Checklist and updated content in response to Government comments.

b. Provide a copy of all Government review comments.

c. Provide a response to each Government review comment for back check.

2.3 DESIGN DRAWINGS

From CAD files, produce design drawings that describe the scope of the Contract for all required submittals including all interim and final deliverables.

2.3.1 Electronic Drawing Files

Provide electronic drawing files in PDF format for each project drawing in the design set.

2.3.2 Drawing Index

Provide an index of drawings sheet as part of the drawing set, and an electronic table of all drawings submitted. Include the electronic file name, the sheet reference number, the sheet number, and the sheet title containing the data for each drawing.

2.3.3 Shop Drawings Used as Design Drawings

Design drawings may be prepared similar to shop drawings to minimize

construction submittals after the Design Complete Submittals. Prepare and submit with the design drawings, appropriate connection, fabrication, layout, and product specific drawings. Government concurrence of an interim design submittal or acceptance of a final design submittal does not mean the Government is approving specific products used or shop drawings incorporated in the design submittal. It is the responsibility of the Contractor to approve use of specific products and other construction submittals outlined in the Technical Specifications, unless Government concurrence or acceptance is requested by the Government for a specific construction submittal.

2.3.3.1 Drawing Format For Shop Drawings Used as Design Drawings

Use the Contractor-originated drawings as the basis for the record drawings. Conform shop drawings included as design documents with the same drawing requirements such as drawing format, sheet size, layering, lettering, and title block used in design drawings.

2.3.3.2 Identification of Shop Drawings Used as Design Drawings

Indicate which shop drawings are being submitted as design drawings in the transmittal letter.

2.3.4 Seal on Documents

Sign, date and seal all Contractor-originated design drawings by the registered engineer of the respective discipline, except for the interim design submittal. The designer of record and design quality control manager must date and digitally sign the interim design submittal to certify that the version of the files sent to the Government are the versions that have gone through the appropriate reviews, however the designer of record is not required to affix their seal to the interim design submittal. Application of the electronic seal and signature accepts responsibility for the work shown thereon.

2.4 SPECIFICATIONS

Provide a Contractor-originated design specification that, in conjunction with the drawings, demonstrates compliance with materials, equipment, execution, and field quality control requirements of the RFP and accepted proposal. Every feature of work must be addressed in the specification, either in its own section, in a section that covers multiple related features, or in an approved consolidation as defined in subpart "Interim Specifications". Every feature of work must include a verifiable and replicable quality control process that the Contractor and Government may use to ensure quality.

2.4.1 Specifications Format

Utilize the Unified Facility Guide Specifications (UFGS) current at the time of Contract award. Process the specifications with the SpecsIntact software package.

a. Edit and expand the appropriate specifications to ensure that all project design requirements, current code requirements, and regulatory requirements are met. Design specifications may be prepared that include manufacturer specific data and catalog cuts in lieu of non-proprietary, descriptive specifications. Clearly identify, where appropriate, specific products chosen to meet the contract

requirements (i.e., manufacturers' brand names and model numbers or similar product information).

b. Note that the UFGS are based on design-bid-build contracting and will require editing to apply to a design-build project. For instance, they assume that the Government will approve most submittals, whereas in design-build, the DOR has that action, unless this solicitation requires Government approval for specific submittals. As such, unless specifically instructed by the Government otherwise, UFGS designations for "Government Approval, G" must be changed to "Designer of Record Approval, D."

c. Organize project sections not based on UFGS in accordance with CSI MasterFormat and UFS 1-300-02.

d. When publishing the Specification package for review include the following format options to ensure a consistent package that meets Government formatting expectations: the package must be published with both a master table of contents and section tables of contents, both "without scope"; only include English units of measure; include section dates, color, and revisions in the interim design and final design submittals, but not in the corrected final nor the issued for construction submittals; restart page numbering for each section and insert blank pages for double-sided printing; the header must include the. The preceding format options are all standard toggles within the SpecsIntact software 'Print/Publish' command.

2.4.2 Identification of Manufacturer's Product Data Used as Specifications.

Provide complete and legible catalog cut sheets, product data, installation instructions, operation and maintenance instructions, warranty, and certifications for products and equipment for which final material and equipment choices have been made. Indicate, by prominent notation, each product that is being submitted including optional manufacturer's features, and indicate where the product data shows compliance with the Contract requirements.

2.4.3 Specifications Packaging

Provide specifications to include the following:

a. Cover sheet and project table of contents.

b. Specification sections, each section with a table of contents.

c. Forms that will be used during the construction phase of the project, and attachments other than manufacturer's product data that is necessary for the construction of the project.

d. Manufacturer's Product Data. If providing as attachments to the applicable specification section, incorporate as attachment reference within the section and section table of contents.

2.4.4 Specification Deliverable

Submit a bundled specification package in PDF format for each design package. As a minimum, bookmark each specification section in the bundled package. Also, submit the source files, in the processing system format, used to create the PDF.

2.5 DESIGN DOCUMENTATION REPORT

Prepare, organize, and present a design documentation report that will document the general parameters, functional and technical requirements, design objectives, design assumptions, and provides design calculations applicable to a project's design. The design documentation report will also include a record of the Contractor's quality reviews including comments, comment evaluations, and backchecks. Organize the design analysis into three parts; Part 1 - General Description; Part 2 - Design Requirements and Provisions; and Part 3 - O&M Provisions. Appendices may be utilized to facilitate good organization and clear and concise communication of information in the main body of the report.

The design documentation report is not a construction document. All designs, diagrams, details, and other technical information necessary for construction must be included in the design drawings and specifications.

Refer to ER 1110-2-1150 Appendix D for content and format guidance. Also refer to ER 1110-345-700 where requirements for the "Design Analysis" will be used for what is expected in the design documentation report.

The design documentation report states the purpose, authorization, applicable criteria and the project description for the project, and provides a summary of the factors influencing the choice of the civil, environmental, HTRW, and sustainable design features used in the project along with an indication of how the initial costs and life cycle costs were factored into final selections. Provide clear, concise, and logical reasoning for design decisions made for the project, with clear references to codes, engineering calculations and analyses, and the Government's Request for Proposal. This reasoning must provide a justifiable defense for the full design. In the final design documentation report clearly and succinctly include:

a. An introductory description of the project concepts that addresses the salient points of the design

b. An orderly and comprehensive documentation of criteria and rationale for system selection, supported by life cycle cost analysis.

c. The identification of any necessary licenses and permits that are anticipated to be required as a part of the design and/or construction process.

d. Identify all applicable codes and criteria and highlight specific requirements within these codes and criteria for critical issues in the utility design.

e. Required calculations as specified and as needed to support the design.

f. Construction quantities estimate and the associated methods of deriving the values.

2.5.1 Design Requirements and Provisions

Include subparts for each major design discipline and basic project design requirements for each discipline that justify and validate design decisions.

2.5.1.1 Civil

Include soil analysis and survey data, site design, site improvements, paving, grading and drainage, water, utilities systems analysis and design.

2.5.1.2 Environmental

Include an impact assessment checklist covering air, water and noise effects from the project and construction; worker health and safety; transportation and disposal regulation requirements; special wildlife, plant, and endangered species considerations; pollution prevention control requirements; and design measures to be implemented (i.e., construction site sediment and erosion control requirements by Federal, state and local governments); and hazardous material management, natural and cultural resources, and environmental permits. Also include a copy of the project's Environmental Site Assessment phase one report, and a copy of the phase two report if a phase two is determined to be necessary.

2.5.2 Operations and Maintenance (O&M) Provisions

Identify design provisions made to enhance and to reduce the cost of operating and maintaining the utility when completed, including but not limited to valves, fittings, and hydrants. Identify any special safety considerations or occupational health related considerations that may affect operation and maintenance activities as a result of the final design.

2.5.3 Design Documentation Report Packaging

2.5.3.1 Assembly and Identification

Assemble design analysis in a single volume with a table of contents if possible. Include a cover page in the basis of design for each discipline indicating the project title and locations, contract number, table of contents, and tabbed separations or bookmarks for quick reference. At a minimum tab or bookmark for each discipline.

2.5.4 Calculations

Place the signature and seal of the designer of record responsible for the work on the cover page of the calculations for the respective design discipline.

2.5.5 Engineering Considerations and Instructions for Field Personnel (ECIFP)

As an addendum to the Design Documentation Report, prepare and submit an ECIFP. The purpose of the ECIFP is to provide construction personnel, with a particular focus on Quality Assurance inspectors, with a concise summary of the features of work engineering views as complex or critical to construction. Use this document for the DOR to communicate areas of heightened risk to construction managers and inspectors. To the greatest extent practical use non-technical and easy to understand language in the ECIFP. Examples of feature to include, but are not limited to, materials or products used in the design that have peculiar installation methods, describing particular restrictions related to an acquired permit, or defining particular testing methods for critical features of work. Structure the document to consolidate specific features of work for easy reference by field personnel. See Appendix A attached to the solicitation

for ECIFP content requirements and best practices.

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS

Include all deliverable products and associated support documents described in Part 2 of this specification with each design submittal.

3.2 DESIGN REVIEW

The Contractor retains responsibility for the quality of the design and construction of the project. As such, the Contractor must conduct all necessary reviews to ensure the highest level of quality. Quality management must conform to ER 1110-3-12 and ER 1165-2-217. At a minimum this will include a Design Quality Control Review, an Independent Technical Review, and review of construction submittals. Government conformance reviews for each design submittal only occur after the Contractor's internal quality reviews of that submittal have been successfully completed. Each design review must utilize DrChecks for comment tracking, refer to subpart 3.6 DESIGN CONFIGURATION MANAGEMENT (DCM) later in this Section.

3.2.1 Design Quality Control Review

Also referred to as a "Detailed Quality Check Review," this is a design review performed by the Contractor's design quality control team approved with the Design Quality Control Plan. Demonstrate a thorough quality review through comments and comment evaluations that provide meaningful improvement to the design package. The primary intent of the design quality control review is to: ensure technical correctness of the design, estimated quantities, and calculations; validate design assumptions and their risks; ensure conformance of the design and design submittals to the Government's request for proposal and all applicable codes; and ensure design submittals meet the highest professional standards for visual presentation, cohesive communication and agreement among design documents, and editorial correctness for grammar and spelling.

Incorporate constructability, Contract administration, environmental considerations, and operability of the design as part of the quality control review.

3.2.2 Independent Technical Review (ITR) - FOR INFORMATION ONLY

Please note, for the Weaverville project an ITR will not be required due to the limited size and complexity of the project scope. The following information regarding the ITR is included for information only as a possible requirement for future MATOC Task Orders. The Government will direct in each Task Order Request for Proposal (RFP) whether or not an ITR is required.

This is a design review, distinct form the Design Quality Control Review, performed by the Contractor's ITR team approved with the Design Quality Control Plan, as defined in Specification Section 01 45 00 QUALITY CONTROL. ITR reviewers are senior-level personnel with appropriate experience for the project being reviewed who are not involved in the day-to-day design or management of the project. The ITR is expected to ensure the Contractor's quality control review was performed completely and correctly. ITR reviewers must concur with the assumptions made for

the design, as well as validate design decisions. The ITR reviewers are responsible for checking that there is enough information in the design drawings and specifications to construct the project, and enough information, calculations, and rationale in the design documentation report to justify the design and defend design decisions.

The ITR is to be performed for any design submittal, including but not limited to the interim design, the final design, and major changes during construction. The timing of the reviews must be included as part of the Design Quality Control Plan outlined in Section 01 45 00 QUALITY CONTROL. The Contracting Officer may approve concurrent Contractor reviews for the interim design submittal, but the ITR for the final design must occur after the Design Quality Control Review is completed and certified.

Designate the ITR reviewer responsible for the controlling discipline for the project as the lead ITR reviewer. The lead ITR reviewer will be responsible for ensuring and verifying the integrity and independence of the ITR, and will ensure comments provided as part of the ITR are appropriate and do not repeat or contradict other comments. The lead ITR reviewer will also be the individual responsible for signing and stamping the ITR review certification required as part of the Design Quality Control Plan outlined in Specification Section 01 45 00 QUALITY CONTROL. Once completed, the signed and stamped ITR review certification must be included in the design documentation report.

3.2.3 Government Conformance Review

This is a check performed by the Government of the design submittals to determine the adequacy of the Contractor's reviews and compliance with the Government's request for proposal and referenced codes and standards. The Government is not responsible for ensuring the technical correctness of the design, and concurrence or acceptance of the design submittal does not represent Government validation of assumptions made nor assurance of technical correctness. Government concurrence or acceptance does not transfer any of the technical risk of the project to the Government. Government conformance reviews will occur for each design submittal, including the interim, final, and corrected final. The corrected final review will only be a backcheck review of previous comments unless new or altered material requires further commenting.

3.3 DESIGN SUBMITTALS PHASES

The stages of design submittals described below define requirements with respect to process and content. Determine how to best plan and execute the design and review process for the project, within the parameters listed below. Provide one interim design submittal, one final design submittal before production of a design package may proceed, and at least one Design Complete submittal that documents the accepted design.

3.3.1 Interim Design Submittal

Submit a single interim design for review, representing a complete package with all design disciplines. See paragraph "Interim Design Document Requirements" for additional information related to the Interim Design Submittal. This is not necessarily a hold point for the design process; the Contractor may designate the interim design submittal(s) as a snapshot and proceed with design development at its own risk. The Contractor must evaluate all interim design submittal comments prior to the submission of the final design package. The Final Design Submission will serve as a

backcheck submittal for the interim design.

3.3.1.1 Interim Design Development Management

Maintain a fully functional configuration management system as described herein to track design revisions, regardless of whether or not there is a need for a formal interim design development review.

3.3.1.2 Fast-Tracking

Fast-tracking is not anticipated to be applicable for this project. Develop the project schedule and budget without fast-tracking.

If the Contractor determines that there can be substantial time or cost savings without additional burden on the Government by implementing a fast-tracked design, the Contractor may recommend it to the Government as part of the initial design conference or before. Provide a detailed plan for implementation of the fast-tracking including specific design submittal schedules, justification for how it will improve project delivery, and how it will be accomplished without additional burden on the Government. The Contracting Officer will make the final determination if fast-tracking is in the best interest of the Government.

Identify the project elements approved to be fast-tracked in the Design Quality Control Plan.

3.3.1.3 Over-the-Shoulder Progress Review

To facilitate a streamlined design-build process, the Government and the Contractor may agree to one-on-one review or small group reviews, on-line, or at the Contractor's design offices or other agreed location, when practicable to the parties. Coordinate such reviews to minimize or eliminate disruptions to the design process. Due to limits on project funding, utilize the maximum virtual teaming methods. Facilitate these reviews with electronic format data transfer and collaboration. Through the partnering process, find ways to facilitate the quality assurance process and to facilitate meeting or bettering the design-build schedule.

3.3.2 Final Design Submissions

After concurrence is given and comments have been provided by the Government for the interim design package, revise the design package to incorporate the comments generated and resolved, perform and document a final design review which includes a backcheck of interim review comments and submit the final design package. Only submit a final design package to the Government that the Contractor, with the concurrence of the designer of record, believes is ready for release to construction. If obvious quality issues are present in the final design, the Government will reject the submittal and require the Contractor to perform another quality control review and ITR. The Government may also consider requiring the replacement of the design quality control manager as defined in Specification Section 01 45 00 QUALITY CONTROL.

3.3.3 Design Complete Submittals

After the final design submission and review conference for the design package, revise the design package to incorporate the comments generated and resolved in the final review conference. Produce a corrected final design package for the final backcheck. Perform and document a backcheck

review to ensure all prior comments have been appropriately addressed and submit the final, design complete documents for final Government backcheck and acceptance of the design package. If the Government concurs that the corrected final design package satisfactorily addresses all prior comments, this submittal is then accepted as the released for construction documents.

3.4 DESIGN PLATFORM AND FILE FORMATS

Design the project using the systems and platforms defined below:

3.4.1 CAD

3.4.1.1 Native CAD Authoring Content

All content produced through CAD authoring software must be compliant with ERDC/ITL SR-23-1 and ERDC/ITL SR-24-3. Autodesk AutoCAD Civil 3D 2023 templates are available for download from the CAD/BIM Technology Center website as part of the A/E/C Work Structure. Provide the CAD submittals as fully operable, compatible, and editable within Civil 3D 2023.

3.4.1.2 CAD Coordinate System

a. Coordinate System: State Plane

b. Zone (for State Plane or UTM): North Carolina

c. Horizontal Units of Measure: US Survey Feet

d. Vertical Units of Measure: Feet

e. Horizontal Datum: NAD 83/2011

f. Vertical Datum: NAVD 88

NOTE: Alternate datum may be proposed by the Contractor for approval by the Contracting Officer. The datum used must be consistent for all positional data throughout the project. Any data stored or transmitted for the project must have the coordinate system and datum utilized clearly indicated.

3.5 MODELING REQUIREMENTS

3.5.1 CAD Modeling Requirements

3.5.1.1 Graphics and Layer Standards

a. All content produced with object/element based CAD authoring software platforms must be compliant with ERDC/ITL SR-23-1.

b. All content produced with layer-centric CAD authoring software must be compliant with ERDC/ITL SR-24-3 and ERDC/ITL SR-23-1.

3.5.2 GIS

3.5.2.1 Minimum Modeling Requirements

Provide final geo-referenced GIS database of the new water lines and

features out to the project extents compliant with the format required by the Town of Weaverville.

Collect GIS geo-referenced data pertaining to location and attribute data of subsurface utilities obtained at the time of project site excavation. Include the collection of elevation (Z) values in all data collection for underground utilities.

3.5.2.2 GIS Coordinate System

Coordinate system must be consistent with the system currently utilized by the town for their GIS data.

3.5.3 CAD

All content produced through layer-centric CAD authoring software outside of any object/element based BIM or CIM platform must be compliant with ERDC/ITL SR-24-3 and ERDC/ITL SR-23-1.

Autodesk AutoCAD Template Files Most recent version at the time of Contract award. Download form the CAD/BIM Technology Center website as part of the A/E/C Work Structure (https://cadbimcenter.erdc.dren.mil/Default.aspx).

3.6 DESIGN CONFIGURATION MANAGEMENT (DCM)

3.6.1 Procedures

Develop and maintain effective, DCM procedures to control and track all revisions to the design documents subsequent to the Interim Design Submission and continuing through submission of the As-Built documents. After the final design is accepted, this process provides control of and documents revisions to the accepted design (See Special Contract Requirement: Deviating From the Accepted Design). Submit the DCM procedures within the Design Quality Control Plan.

a. Include authorities and concurrences in the DCM system to authorize revisions, including documentation as to why the revision is required.

b. The Government's Design Review and Checking System (DrChecks) must be used for all design reviews, including the Contractor's Design Quality Control Review, the Contractor's Independent Technical Review, and the Government's Design Conformance Review, as well as any conformance reviews for construction.

c. Make the DCM data available to the Government at all times.

d. Updated versions of each document, including, but not limited to, each design submittal, must include a document listing specific changes made in a concise format that defines the location of the change within the package or document, whether the change was an addition, revision, or deletion, and the specific description of the change made.

Once comments are entered into DrChecks, designers and reviewers must strive to resolve comments outside of the DrChecks comment management software. It is recommended to discuss and resolve comments in-person or over conference calls to ensure efficient and clear communication between the reviewer and designers. Once a resolution to the comment is agreed upon, input the comment evaluation into DrChecks. If persistent disagreements remain, document these differences and the Designer of

Record's resolution in DrChecks. Discuss the comment and resolution in the design documentation report with a clear assessment of the risks.

The Contractor may request the use of different commenting procedures than those outlined in this specification. With the request the Contractor must thoroughly outline how the alternative procedures will be functionally equivalent to DrChecks and how use of the alternate system will benefit the Government. The Contracting Officer retains the right to reject alternative systems regardless of the justifications used if they believe use of DrChecks remains in the best interest of the Government. A system that does not maintain functional equivalence to DrChecks or does not present a meaningful benefit to the Government are unlikely to be accepted.

3.6.2 Tracking Design Review Comments

Use the DrChecks Design Review and Checking System to initiate, respond to, resolve and track all design review comments.

The Government will set up the project in DrChecks. Throughout the design process parties enter, track, and back-check comments using the DrChecks system. Designers of Record annotate comments timely and specifically to indicate exactly the action to be taken or why the action is not required. Prior to the next design review for the package, the DORs annotate those comments that require DOR action or design revision to show how and where it has been addressed in the design documents. These procedures are part of the required design configuration management plan. Flag comments considered critical by the conference participants.

3.6.2.1 DrChecks Initial Account Set-Up

Identify a contact person within the office to act as the administrator for all Contractor personnel, including subcontractors, that will be accessing the PROJNET Dr Checks system. Through the Contracting Officer, coordinate with the Project Manager and the District PROJNET administrator for system access, system instruction and comment process instructions.

PROJNET contains an introductory file and other tutorial material that can be accessed once user accounts have been established. Upon log in, select Portals/User Documentation.

3.6.2.2 DrChecks Review Comments

Annotate and resolve all comments prior to the next design quality review or design submittal. Include the DrChecks comments and responses in the design documentation report for record in the next design submittal for the package.

a. Upon review of comments prior to the design review conference, the DOR(s) evaluate the comments. Include exactly what action will be taken or why action is not required.

b. After the review conference, the DOR(s) formally respond to each applicable comment in DrChecks a second time, prior to the next submittal, clearly indicating what action was taken and what drawing/spec/report section changed. Designers of Record are encouraged to directly contact reviewers to discuss and agree to the formal comment responses rather than relying only on DrChecks and review meetings to discuss comments. With the next design submittal,

reviewers will back-check answers to the comments against the new submittal, in addition to reviewing additional design work.

c. Clearly annotate in DrChecks those comments that require effort outside the requirements of the Contract. The Contracting Officer will make a determination if the comment is a departure from the authorized scope and if it is, whether the comment will result in a Contract modification or result in the comment being withdrawn by the Government. Do not proceed with work outside the contract until a modification to the contract is properly executed.

3.7 DISCIPLINE DESIGN REQUIREMENTS

Provide interim design deliverables that include drawings, specifications, and design documentation report for the full project design. Only provide design deliverables after a design quality control review and an independent technical review have been completed and the package is considered ready for a Government conformance review. Design deliverables that do not meet minimum design maturity requirements or have not demonstrated a sufficient level of quality control review will be returned to the Contractor for further development. If the design package is returned for failing to meet minimum requirements, the time allowed for the Government to review the package is 30 days from the date of receipt of the resubmission. Since the Government expects to receive an appropriately reviewed package, include the following for each design submittal.

a. Drawings: Include comments from any previous design conferences incorporated into the documents to provide an interim design for the feature of work submitted.

b. Specifications: Provide specifications to ensure that all project design features are addressed, meeting current code requirements, and regulatory requirements. Use the track changes feature (redlines) to facilitate review of additions and deletions.

c. Design Documentation Report: Prepare and present design documentation report under the authority of the DOR, with calculations necessary to substantiate and support all design documents submitted. Address design substantiation required by the applicable codes and references. Identify specific code requirements related to the project and how they were accounted for in the design.

3.7.1 Geotechnical Considerations

The designer of record is responsible for ensuring geotechnical considerations related to utility replacement are accounted for in the design drawings, specifications, and design documentation report. If this type of work is outside the designer of record's area of expertise, consult with a registered geotechnical engineer before the first interim design submittal to verify geotechnical factors are being appropriately considered. If the designer of record does have competence in geotechnical engineering, this expertise must be demonstrated in the practical experience identified as part of the design quality control plan, defined in Specification Section 01 45 00 QUALITY CONTROL. Geotechnical factors for consideration including, but not limited to, adequate research into the potential for shallow rock deposits and subsurface investigations in identified areas, construction equipment weigh restrictions based on existing pavement, and pavement sections

including fill material for trenches based on code requirements.

Prepare further documentation if required by local, State, or Federal regulations as defined in the applicable code.

3.7.1.1 Trench Backfill and Compaction Requirements

Adhere to local, State, and Federal guidance and regulations related to utility trench backfill and compaction, including but not limited to those listed in Weaverville Standards, NCDOT SSRS, and NCDEQ PWS.

3.7.1.2 Minimum Testing Requirements

Include compaction and classification testing in the design specifications with a designation for designer of record approval. Include at minimum, but not limited to, the following tests ASTM D2216, ASTM D1557, ASTM D422, ASTM D1140, and ASTM D4318. At a minimum compaction testing must occur every 200 ft for each lift of material placed. Designer of record may required a higher frequency of testing to ensure compaction requirements are met.

3.7.2 Land Survey

The contractor must land survey the site for accurate design and construction. Pre-Construction / Topographic surveys must be performed to the accuracy of the design need and must produce a minimum 1-foot contour interval. Land survey must identify all existing features which includes, but may not be limited to, roads, sidewalks, utilities above and below ground, catch basins, striping, trees, and other related features. The Land Surveyor shall conduct a diligent search of all easements, rights-of-way, parcel maps, tract maps, records of survey, and property boundary data within the project limits to ensure there are no encroachments from the proposed work. All data must be mapped in accordance with applicable local, state, and federal land surveying statues and regulations. This data must be displayed on the survey sheets of the project plans and at a minimum, depict metes and bounds, found monuments, and current ownership data. Land survey must be stamped and sealed by a Professional Land Surveyor. Perform land survey in accordance with the reference publications specified,EM 385-1-1, EM 405-1-3, EM-1110-1-1000 EM 1110-1-1002, EM 1110-1-1003, EM 1110-1-1005, and EM 1110-1-2909. Use all available resources and engineering judgment to identify all known and unknown utilities in the area. Utility identification includes, but is not limited to, research as-built drawings, GIS data, facilities maps, coordination with utility purveyors, marking utilities, pot holing, scanning the site with ground penetrating radar (GPR), electromagnetic, or sonic equipment and other related methods.

Survey data must:
1) be referenced horizontally to the applicable State Plane Coordinate System, NAD83, using U.S. Survey Feet and vertically to NAVD88, using feet or;
2) match the same datum that will be used on the designer's Contract Drawings.

Additionally, provide all CAD files and electronic data in AutoCAD compatible files (.DWG), which include but not limited to .tin, .alg, .eav, .xyz, .xls (raw data point clouds) and .ASCII or .XML file types used to generate the submitted .dwg electronic drawings such as contours, .tins, plan views,

profiles, and cross sections, along with any accompanying field notes (written or electronically collected).

Construction survey layout is to include at minimum establishing and maintaining grade stakes or markings offset from the pipe alignment at every change in grade, bearings, significant features, and on 50-foot intervals along the alignment.

3.7.2.1 Post-Construction Survey

A final as-built survey shall be in accordance with the requirements listed above in subpart 3.7.2 and be performed after all materials have been placed at the site and have been accepted by the Contracting Officer. The results of this survey are to be used in the preparation of the final as-built drawings and record drawings required in Section 01 78 00 CLOSEOUT SUBMITTALS.

3.7.3 Civil Site and Utilities Design Contents

Include the following in the interim design for the site and utilities. This list is not intended to limit the contractor from providing different or additional information as needed to support the design presented. The design drawings and specifications must be sufficient both for construction and for measuring conformance to Contract requirements.

a. Pavement design in coordination with the geotechnical investigation report or local guidelines.

b. Location and vicinity maps

c. Demolition plan: identify segments of existing pipe and structures, including fire hydrants, to be removed or protected in place. Make a clear distinction between existing pipes to remain in operation and be protected in place, pipes to be removed, and pipes to be abandoned in place.

d. Layout plan

e. Horizontal and vertical survey control

f. Utility Plan-Profile: Provide horizontal control of the pipe alignment which includes, but not limited to at minimum, major features identified with northings and eastings, bearings and distances, and linear dimensions. It must be clear where each feature of work aligns relative to survey control, geographic coordinates and existing conditions. Identify and include located water lines, sanitary sewer lines, force mains, and other subsurface utility features. Indicate station and elevations, change in grades, and invert elevations of all existing utilities crossing the new utilities.

g. Road profiles, may be the same as the utility profile

h. Traffic Plan: Identify signage, personal, traffic control devices, and procedures for protecting vehicular and pedestrian traffic and ensuring minimal disruption in traffic flow during construction.

i. Civil details sheet

j. Erosion and Sediment Control Plan

k. Site specific civil calculations

The Contractor holds the responsibility for identifying the locations of existing utilities. Conduct due diligence to research and survey existing utility locations and depth to ensure adequate separation of the water main from existing utilities and to ensure other existing utilities are not damaged during construction.

3.7.3.1 Specific Civil Design Requirements

Incorporate the following additional requirements into the project design:

a. Provide and replace fire hydrants required to meet Town fire codes. Each fire hydrant replaced must include three isolation valves, two on the main line on either side of the hydrant tee and one on the hydrant line itself.

b. At replaced pipe intersections, including tees and crosses, place valves on each segment of pipe leaving the intersection. A new valve may be omitted from a specific segment of pipe leaving an intersection if there is a valve on that same segment of pipe within 50 feet of the pipe intersection.

c. As defined in Weaverville Code, the Town must be allowed to inspect all pipe placed or hydrants installed for the project prior to backfilling trenches. Communicate the project schedule with the Town through the Contracting Officer to give the Town sufficient advanced notice prior to backfilling activities.

d. Minimize residential and commercial water supply outages to the greatest extent practical. If outages are required, the maximum allowable outage duration is 24 hours. Water service outages must be planned in advance. Notify the Contracting Officer no less than 10 days prior to a planned outage.

e. In locations where asphalt repair or repavement is necessary due to work performed under this Contract Task Order, mill and overlay a minimum of one lane width, or approximately 12 feet, unless otherwise approved by the Contracting Officer.

3.8 DESIGN MATURITY

Develop the design and design submittals to the level appropriate for each given submittal review. Use ECB 2023-9 as a general outline for the level of detail required for each design submittal.

3.9 INTERIM DESIGN REQUIREMENTS

One interim design submittal, review and review conference is required for the design package. This will include the design drawings, specifications, and design documentation report. Additional interim design conferences or over-the-shoulder reviews may be scheduled, as needed, to assure continued Government concurrence with the design work. Include the interim submittal review periods and conferences in the Section 01 32 01.00 10 PROJECT SCHEDULE and indicate in periodic schedule updates what part of the design work is at what percentage of completion.

3.9.1 Interim Design Document Requirements

In addition to the requirements outlined for preliminary design and intermediate design in ECB 2023-9, the interim design must meet the following maturity requirements:

3.9.1.1 Interim Design Drawings

Include a draft version of the full plan set which includes all anticipated sheets and shows all required plans, profiles, and details. Finalize the design drawings to the greatest extent practical. At minimum the following should be included, completed and implemented topographic survey (with all existing utilities identified) and the proposed waterline alignment. Additionally, provide callouts, dimensions, and elevations of existing features. Style existing feature annotations with italicized text. When known deficiencies are included in the plans (for instance, if a utility profile was identified in the Contractor's internal quality control review as lacking specific information that will need to be collected from the site but should not affect the overall design), provide a clear indication of where the specific deficiency exists and what actions will be taken to address it. Leaving profiles or details blank or including general notes that are not related to the project without providing this notation may result in the design submittal being rejected for not meeting design maturity requirements.

3.9.1.2 Interim Specifications

Provide a preliminary draft of the specification package. Specifications must include all sections required for the project, edited and tailored for site specific conditions. At a minimum the specifications must have appropriate tailoring options selected and some brackets edited to account for project and site specific context and features. Include the preliminary submittal register as defined in Section 01 33 00 SUBMITTAL PROCEDURES.

If the Designer of Record and the construction representative agree that it would be clearer and more effective to consolidate tangentially related specification sections that are mostly not relevant to the project, the designer of record may lay out a consolidation plan including specific elements from the specification section being incorporated into the other such that the relevant information will be accounted for in the section being kept. Include this plan in the design documentation report, and clearly indicate in brackets in the specification section being kept what and where additional information is being incorporated and which specification section it is being taken from. The Government reserves the right to reject the consolidation of specification section if it believes it is not in the best interest of the Government to consolidate. It is recommended that the Contractor seek preliminary concurrence from the Government before pursuing the consolidation of specification sections.

3.9.1.3 Interim Design Documentation Report

Provide clear and concise narrative describing the remaining actions, data collection requirements, and design input necessary to advance to the final design. Clearly document design decisions made during the interim design and any known design decision that remain before the final design. Include a preliminary Engineering Considerations and Instruction for Field Personnel (ECIFP) report for review.

3.9.2 Submission Review

After receipt of an Interim Design submission, the Government requires 30 calendar days after receipt of the submission to review and comment on the interim design submittal. For smaller design packages, especially those that involve only one or a few separate design disciplines, the parties may agree on a shorter review period or alternative review methods (e.g., over-the -shoulder or electronic file sharing), through the partnering process.

a. For each interim design review submittal, the Contracting Officer will furnish a single consolidated, validated set of comments from the various design sections and from other concerned agencies involved in the review process using the DrChecks Design Review and Checking System. The review will be for conformance with the technical requirements of the Contract.

b. The Government reserves the right to reject design document submittals if comments are deemed significant.

c. Furnish disposition of all comments, in writing, through DrChecks. If there are technical disagreements with any comments, clearly outline, with justification, the reasons for disagreement and noncompliance within five calendar days after receipt of these comments.

d. As stated in subpart "DrChecks Review Comments," the Contractor is cautioned that if it believes the action required by any comment exceeds the requirements of this contract, that it should take no action and notify the Contracting Officer in writing immediately, and await further clarification and instruction.

3.9.3 Interim Review Conference

Hold an Interim Review conference for each design submittal at either the installation or as agreed upon as part of the partnering process. Attendees include, at a minimum, the DOR(s) involved in development of the design submittal. Schedule the conference to take place the week after the receipt of the comments. Notify the Contracting Officer of any comments that with concurrence would require further design development.

For smaller fast-track packages that involve only a few reviewers, the parties may agree to alternative conferencing methods, such as teleconferencing, or televideo, where available, as determined through Partnering.

3.9.4 Review Conference Documentation

3.9.4.1 Minutes and Comment Process

Provide meeting minutes within three work days after the conference adjourns, and enter final resolution of all comments into DrChecks. Include copies of comments, annotated with comment action agreed on, with the minutes.

a. Resolve issues remaining open after the conference adjourns by immediate follow-on action to close the issue within 30 calendar days.

b. Incorporate comments as agreed upon during the conference.

3.9.4.2 Availability

In order to facilitate the Government code and contract conformance reviews, identify, track resolution of, and maintain all comments and action items generated during the design review process. Make this available to the designers and reviewers prior to the subsequent design reviews.

3.10 FINAL DESIGN REQUIREMENTS

Provide final design submittal that consist of 100 percent complete drawings, specifications, submittal register, design documentation report for Government review and concurrence.

a. Include any permits required by the contract for each package submitted.

b. In order to expedite the final design review, prior to the conference, ensure that the design configuration management data and all review comment resolutions are up-to-date.

c. Perform independent technical reviews and backchecks of previous comment resolutions, as required by Section 01 45 00 QUALITY CONTROL.

3.10.1 Design Drawings

Submit drawings complete with all contract requirements incorporated into the documents to provide a 100 percent design for each package submitted. In addition to all native CAD Modeling files, provide separate electronic files in a PDF format.

3.10.1.1 Geo-Referenced Data

Capture geo-referenced coordinates of all changes that will be made to the existing site (utility line installations and alterations, roads, etc) as a result of this contract.

Close-out requirements at the as-built stage, require final geo-referenced GIS Database of the new facility along with all exterior modifications. The Government will incorporate this data set into the Town's GIS System. See also, Section 01 78 00 CLOSEOUT SUBMITTALS.

3.10.2 Design Documentation Report

Provide a design documentation report with calculations necessary to validate and support all design work submitted. Expand and advance calculations and information presented in the interim design stage to the current level of design. Move design narrative elements that were specific to the interim design and are no longer applicable, such as those detailing specific plans for the project specifications, to a new interim design appendix for future reference. The responsible DOR(s) stamp, sign and date the design documentation report, which also includes the review certifications required by the Design Quality Control Plan in Specification Section 01 45 00 QUALITY CONTROL.

3.10.3 Specifications

Provide specifications 100 percent complete, displaying corrections, additions, and revisions in color. Also provide the electronic files in .sec

format for the specifications.

3.10.4 Submittal Register

Provide an updated, cumulative submittal register with the design package that identifies the design and construction submittals required.

3.11 CORRECTED FINAL DESIGN REQUIREMENTS

Provide corrected final design submittal that consist of the final design package after incorporating comments from the Government's final design review for Government backcheck and acceptance. In addition to tracking changes made in response to Government comments, track and report any additional change made from the concurred Final Design package for Government review.

3.11.1 Design Drawings

Submit drawings complete with all contract requirements incorporated into the documents to provide a 100 percent design for each package submitted. In addition to all native Advanced Modeling files, provide separate electronic files in a PDF format.

3.11.2 Design Documentation Report

Provide a design analysis with calculations necessary to validate and support all design work submitted. Expand and advance calculations and information presented in the interim design stage to the current level of design. The responsible DOR(s) stamp, sign and date the design analysis.

3.11.3 Specifications

Provide specifications 100 percent complete and in final form without color and with revisions executed or hidden. Provide updated electronic files in .sec format for all sections that were revised during the final review.

3.11.4 Submittal Register

Provide an updated, submittal register incorporating any revisions required by the final design review.

3.12 DESIGN COMPLETE CONSTRUCTION DOCUMENT REQUIREMENTS

After the corrected final design package is backchecked and all comments are closed, submit the final design complete documents which, after Government acceptance, are also referred to as the Issued for Construction (IFC) documents. The deliverable includes all documentation and supporting design analysis in final form, as well as the final review comments, disposition and the back-check. As part of the quality assurance process, the Government may perform a review of the released for construction documentation. Promptly correct any errors or omissions found during the Government review. Changes that are not directly in response to Government comments are not allowed when preparing the IFC package. If the DOR believes additional changes are necessary between the Corrected Final Design submittal and the IFC submittal, these change must follow the procedures outlined in Specification Section 01 33 00 SUBMITTAL PROCEDURES, subpart "Variations from the Accepted Design". Changes made to the design drawings and specifications that are not specifically

brought to the Government's attention for acceptance and not considered part of the accepted design. The Contractor may be required to rework features of work that are constructed based on designs and parts of designs that have not been accepted.

3.13 ACCEPTANCE AND RELEASE FOR CONSTRUCTION

After acceptance of the design complete documents, these documents will become the "released for construction" version of the design package, and the Contracting Officer will allow construction to start for that design package.

Government review and acceptance of design submittals is for contract conformance only and does not relieve the Contractor from responsibility to fully adhere to the requirements of the contract, including the Contractor's accepted proposal, or limit the Contractor's responsibility of design or limit the Government's rights under the terms of the contract. The Government reserves the right to rescind inadvertent acceptance of design submittals containing contract deviations not separately and expressly identified in the submittal for Government consideration and approval.

3.14 DESIGNER RESPONSIBILITIES DURING CONSTRUCTION

During construction the Designer of Record is responsible for reviewing all technical submittals and approving all submittals marked for "designer of record approval". The Contractor is responsible for the technical accuracy and relevance of all submittals. If the Contractor repeatedly fails to correct submittal mistakes or quality issues, or fails to correct a singular major quality issue, the Government may pursue corrective action to ensure construction quality and design integrity.

The DOR is expected to aid in the preparation of periodic as-built drawing updates throughout construction and the final preparation of Record Drawings at the end of construction. As-Builts and Record Drawings are further defined in Specification Section 01 78 00 CLOSEOUT SUBMITTALS. DOR must maintain a consolidated working set of specifications during construction and provide them to the Government upon request.

The DOR is also expected to occasionally visit the construction site before, during, and after active construction. DOR site visits are meant to ensure that critical construction features are installed or constructed properly according to the DOR-approved and Government-accepted plans and specifications. The Contractor in conjunction with the DOR for each discipline is responsible for ensuring that the work associated with each DOR's discipline has been constructed in accordance with the accepted Issued for Construction (IFC) documents. At a minimum the DOR must visit the project site four times: once before or during design, which can be accomplished as part of the initial design conference; once after the design has been accepted by the Government but before construction begin, to help communicate design requirements to construction managers; once during construction, this would happen early in the construction of a critical feature to ensure construction is progressing as defined in the accepted IFC documents; and once following construction or very near the conclusion of construction to verify the as-constructed conditions match the accepted IFC drawings. Deficiencies identified at any of these site visits must be promptly communicated to the Contractor's Quality Control Manager and the Contracting Officer.

-- End of Section --

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.15 10

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

PART 1 GENERAL

1.1 REFERENCES
1.2 MEASUREMENT AND PAYMENT
1.3 CONSTRUCTION CONTRACT SYSTEM OF RECORD TRANSITION
1.3.1 System Of Record Transition
1.4 CONTRACT ADMINISTRATION
1.4.1 Correspondence and Electronic Communications
1.4.2 Other Factors
1.5 RMS SOFTWARE
1.6 CONTRACT DATABASE - GOVERNMENT
1.7 CONTRACT DATABASE - CONTRACTOR
1.7.1 Administration
1.7.1.1 Contractor Information
1.7.1.2 Subcontractor Information
1.7.1.3 Correspondence
1.7.1.4 Equipment
1.7.1.5 Reports
1.7.1.6 Request For Information (RFI)
1.7.2 Finances
1.7.2.1 Pay Activity Data
1.7.2.2 Payment Requests
1.7.3 Quality Control (QC)
1.7.3.1 Quality Control (QC) Reports
1.7.3.2 Deficiency Tracking
1.7.3.3 Three-Phase Control Meetings
1.7.3.4 Labor and Equipment Hours
1.7.3.5 Accident/Safety Reporting
1.7.3.6 Definable Features of Work
1.7.3.7 Activity Hazard Analysis
1.7.4 Submittal Management
1.7.5 Schedule
1.7.6 Closeout
1.8 IMPLEMENTATION
1.9 NOTIFICATION OF NONCOMPLIANCE

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01 45 00.15 10

RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM)

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this section 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	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 MEASUREMENT AND PAYMENT

The work of this section is not measured for payment. The Contractor is responsible for the work of this section, without any direct compensation other than the payment received for contract items.

1.3 CONSTRUCTION CONTRACT SYSTEM OF RECORD TRANSITION

The construction contract system of record for this contract is the system designated by the Contracting Officer and administered by the administering District. The construction contract system of record will be either the Resident Management System (RMS) or the Construction Management Platform (CMP).

1.3.1 System Of Record Transition

The Contractor must be prepared to transition from RMS to CMP at any time during the period of performance when directed by the Government as USACE implements this enterprise change. The Contractor’s obligation to transition is a requirement of this contract; therefore, additional time or cost increase to complete this transition will not be considered. At transition, applicable project information will be migrated from RMS by the Government and made available in CMP. Once the transition is complete, the Contractor must then use CMP to perform all contract administration functions. The Contracting Officer will provide the contractor notification of the transition schedule applicable to this contract.

For contracts initiated in RMS and awarded before the District transition to CMP, RMS is the construction management system of record at project start. The Contractor must comply with the requirements of Section 01 45 00.15 10 RMS CM while RMS remains the system of record. Upon completion of a Government facilitated transition from RMS to CMP, the Contractor must comply with all requirements of specification Section 01 45 00.25 10 Construction Management Platform for the contract administration in CMP. Upon transition, all references to RMS within the entire specification package are superseded by CMP; any associated administrative, submittal, or reporting requirements tied to RMS must be interpreted as requirements for CMP.

1.4 CONTRACT ADMINISTRATION

The Government will use the Resident Management System (RMS) to assist in its monitoring and administration of this contract. The Government accesses the system using the Government Mode of RMS (RMS GM) and the Contractor accesses the system using the Contractor Mode (RMS CM). The term RMS will be used in the remainder of this section for both RMS GM and RMS CM. The joint Government-Contractor use of RMS facilitates electronic exchange of information and overall management of the contract.

The Contractor accesses RMS to record, maintain, input, track, and electronically share information with the Government throughout the contract period in the following areas:

a. Administration

b. Finances

c. Quality Control

d. Submittal Monitoring

e. Scheduling

f. Closeout

g. Import and Export of Data

1.4.1 Correspondence and Electronic Communications

For ease and speed of communications, exchange correspondence and other documents in electronic format to the maximum extent feasible.

1.4.2 Other Factors

Other portions of this document have a direct relationship to the reporting accomplished through RMS. Particular attention is directed to FAR 52.236-15 Schedules for Construction Contracts; FAR 52.232-27 Prompt Payment for Construction Contracts; FAR 52.232-5 Payments Under Fixed-Priced Construction Contracts; Section 01 32 01.00 10 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL.

1.5 RMS SOFTWARE

RMS is a web based application. Download, install and be able to utilize the latest version of RMS within 7 calendar days of receipt of the Notice to Proceed. RMS software, user manuals, access and installation instructions, program updates and training information are available from the RMS website https://rms.usace.army.mil. The Government and the Contractor will have different access authorities to the same contract database through RMS. The common database will be updated automatically each time a user finalizes an entry or change.

1.6 CONTRACT DATABASE - GOVERNMENT

The Government will enter the basic contract award data in RMS prior to granting the Contractor access. The Government entries into RMS will

generally be related to submittal reviews, correspondence status, and Quality Assurance(QA)comments, as well as other miscellaneous administrative information.

1.7 CONTRACT DATABASE - CONTRACTOR

Contractor entries into RMS establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include prime and subcontractor information, daily reports, submittals, RFIs, schedule updates, and payment requests. RMS includes the ability to import attachments and export reports in many of the modules, including submittals. The Contractor responsibilities for entries in RMS typically include the following.

1.7.1 Administration

1.7.1.1 Contractor Information

Enter all current Contractor administrative data and information into RMS within 7 calendar days of receiving access to the contract in RMS. This includes, but is not limited to, Contractor's name, address, telephone numbers, management staff, and other required items.

1.7.1.2 Subcontractor Information

Enter all missing subcontractor administrative data and information into RMS CM within seven calendar days of receiving access to the Contract in RMS or within seven calendar days of the signing of the subcontractor agreement for agreements signed at a later date. This includes name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor is listed separately for each trade to be performed.

1.7.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's site office with "S". Prefix letters initiated by the Contractor's home (main) office with "H". Letters are numbered starting from 0001. For example, H-0001 or S-0001. The Government's letters to the Contractor will be prefixed with "C" or "RFP".

1.7.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates in accordance with Section 01 45 00 QUALITY CONTROL.

1.7.1.5 Reports

Track the status of the project using the reports available in RMS. The value of these reports reflects the quality of the data input. These reports include but are not limited to the Progress Payment Request worksheet, Quality Control (QC) comments, Deficiency Tracking Log, Submittal Register Status, and Three-Phase Control worksheets in accordance with Sections 01 20 00 PRICE AND PAYMENT PROCEDURES, Section 01 32 01.00 10 PROJECT SCHEDULE, 01 33 00 SUBMITTAL PROCEDURES, and 01 45 00 QUALITY CONTROL.

1.7.1.6 Request For Information (RFI)

Create and track all Requests For Information (RFI) in the RMS Administration Module for Government review and response. Provide status at weekly progress meeting in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE.

1.7.2 Finances

1.7.2.1 Pay Activity Data

Develop and enter a list of pay activities in conjunction with the project schedule in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE. The sum of pay activities equals the total Contract amount, including modifications. Each pay activity must be assigned to a Contract Line Item Number (CLIN). The sum of the activities assigned to a CLIN must equal the amount of each CLIN.

1.7.2.2 Payment Requests

Prepare all progress payment requests using RMS. Update the work completed under the Contract at least monthly, measured as percent or as specific quantities. After the update, generate a payment request and prompt payment certification using RMS. Submit the signed prompt payment certification and payment request as well as supporting data, either electronically or by hard copy.

1.7.3 Quality Control (QC)

Enter and track implementation of the 3-phase QC Control System, QC testing, transferred and installed property and warranties in RMS. Link each deficiency and QC test to a pay activity. Prepare daily reports, identify and track deficiencies, document progress of work, and support other Contractor QC requirements in RMS. Maintain all data on a daily basis. Ensure that RMS reflects all quality control methods, tests and actions contained within the Contractor Quality Control (CQC) Plan and Government review comments. Provide within seven calendar days of Government acceptance of the CQC Plan.

1.7.3.1 Quality Control (QC) Reports

The Contractor's Quality Control (QC) Daily Report in RMS is the official report. The Contractor can use other supplemental formats to record QC data, but information from any supplemental formats are to be consolidated and entered into the RMS QC Daily Report. Any additional supplemental information may be entered into RMS as an attachment to the report. QC Daily Reports must be finalized and signed in RMS within 24 hours after the date covered by the report.

1.7.3.2 Deficiency Tracking

Use the QC Daily Report Module to enter and track deficiencies. Deficiencies identified and entered into RMS by the Contractor or the Government will be sequentially numbered with a QC or QA prefix for tracking purposes. Enter each deficiency into RMS the same day that the deficiency is identified. Monitor, track and resolve all QC and QA entered deficiencies. A deficiency is not considered to be corrected until the Government indicates concurrence in RMS.

1.7.3.3 Three-Phase Control Meetings

Maintain scheduled and actual dates and times of preparatory and initial control meetings in RMS, and upload meeting minutes of the meetings. Worksheets for the three-phase control meetings are generated within RMS.

1.7.3.4 Labor and Equipment Hours

Enter labor and equipment exposure hours on a daily basis. Roll up the labor and equipment exposure data into a monthly exposure report.

1.7.3.5 Accident/Safety Reporting

Both the Contractor and the Government enter safety related comments in RMS as a deficiency. The Contractor must monitor, track and show resolution for safety issues in the QC Daily Report area of the RMS QC Module. In addition, follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required by any other applicable Federal, State or local agencies.

1.7.3.6 Definable Features of Work

Enter each feature of work, as defined in the approved CQC Plan, into the RMS QC Module. A feature of work may be associated with a single or multiple pay activities, however a pay activity is only to be linked to a single feature of work.

1.7.3.7 Activity Hazard Analysis

Import Activity Hazard Analysis electronic document files into the RMS QC Module utilizing the document package manager. Prepare activity hazard analysis in accordance with Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS.

1.7.4 Submittal Management

Enter all current submittal register data and information into RMS within seven calendar days of receiving access to the Contract in RMS. Contractor is responsible for entering Activity Numbers for each submittal item corresponding to their Project Schedule such that submittal delivery is linked to the Project Schedule in RMS. The Contractor will initially import the information shown in the Government provided submittal register following the specification Section 01 33 00 SUBMITTAL PROCEDURES unless otherwise directed by the Contracting Officer. Group electronic submittal documents into transmittal packages to send to the Government, except very large electronic files, samples, spare parts, mock ups, color boards, or where hard copies are specifically required. Track transmittals and update the submittal register in RMS on a daily basis throughout the duration of the Contract.

Enter all submittals as listed in the approved design's submittal register within 14 calendar days of design approval for construction.

Contractor may request submittals to be added to RMS throughout the lifecycle of the project. Approval/disapproval of Contractor requests is at the discretion of the Contracting Officer. Submittals entries into RMS must be updated daily, or as practical for performance of the Contract as approved by the Contracting Officer.

1.7.5 Schedule

Enter and update the contract project schedule in RMS by either manually entering all schedule data or by importing the Standard Data Exchange Format (SDEF) file, based on the requirements in Section 01 32 01.00 10 PROJECT SCHEDULE.

1.7.6 Closeout

Closeout documents, processes and forms are managed and tracked in RMS by both the Contractor and the Government. Ensure that all closeout documents are entered, completed and documented within RMS.

1.8 IMPLEMENTATION

Use of RMS as described in the preceding paragraphs is mandatory. Ensure that sufficient resources are available to maintain contract data within the RMS system. RMS is an integral part of the Contractor's required management of quality control.

1.9 NOTIFICATION OF NONCOMPLIANCE

Take corrective action within seven calendar days after receipt of notice of RMS non-compliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 45 00.25 10

CONSTRUCTION MANAGEMENT PLATFORM (CMP)

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 CMP SOFTWARE
1.4 CONSTRUCTION CONTRACT SYSTEM OF RECORD
1.4.1 System of Record Transition
1.4.2 Training
1.5 CONTRACT ADMINISTRATION
1.5.1 Correspondence And Electronic Communications
1.5.2 Other Factors
1.6 CMP CONTRACT DATABASE
1.6.1 Administration
1.6.1.1 Contractor Information
1.6.1.2 Subcontractor Information
1.6.1.3 Correspondence
1.6.1.4 Equipment
1.6.1.5 Data, Reports and Templates
1.6.2 Document Management
1.6.2.1 BIM
1.6.2.2 Correspondence
1.6.2.3 Design Review
1.6.2.4 File Manager
1.6.2.5 Media Manger
1.6.2.6 Meetings
1.6.2.7 Submittals
1.6.2.8 Requests for Information (RFIs)
1.6.2.9 Risk Register
1.6.2.10 Scheduling
1.6.2.11 Work Packages
1.6.3 Field Management
1.6.3.1 Forms
1.6.3.1.1 Accident Prevention Plan (APP)
1.6.3.1.2 Contractor Quality Control Plan (QCP)
1.6.3.1.3 Activity Hazard Analysis (AHA)
1.6.3.2 Closeout
1.6.3.3 Commissioning
1.6.3.4 Deficiencies
1.6.3.5 Definable Features of Work (DFOW)
1.6.3.6 Field Observations
1.6.3.7 Mishap Reporting
1.6.3.8 Inspections
1.6.3.9 Daily Reports
1.6.3.10 Three-Phase Quality Control
1.6.4 Cost Management
1.6.4.1 Contract Transfer - DD Form 1354

1.6.4.2 Issues And Potential Changes
1.6.4.3 Progress Payments
1.7 IMPLEMENTATION
1.8 NOTICE OF NONCOMPLIANCE

PART 2 PRODUCTS

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01 45 00.25 10

CONSTRUCTION MANAGEMENT PLATFORM (CMP)

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	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

1.2 SUBMITTALS

Manage all project submittals in CMP and in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

1.3 CMP SOFTWARE

CMP is an IL-4 web-based application capable of handling Controlled Unclassified Information (CUI) and other sensitive government data. Do not enter, upload, transmit, or store information in CMP that exceeds the system authorization or applicable contract security requirements.

To ensure secure access, obtain and maintain credentials required for CMP access. Authenticate using EAMS-A and EAMS-A MobileConnect.

CMP is authorized for deployment on mobile devices and is available on both iOS and Android platforms. Contractors are authorized to use the CMP mobile application for the entry, management, and maintenance of contract data required by the contract using the approved authentication method. Subject to project-specific authorization and guidance, contractors may download CMP from the Apple App Store or Google Play Store and use it securely in accordance with the approved authentication method and applicable security requirements. Most applications are available on the CMP mobile application which includes offline capabilities when an internet connection is unavailable and automatic sync once reconnected.

CMP and the CMP Mobile Application minimum system requirements are available at the Kahua System Requirements website:

Kahua System Requirements
https://kahua.mcoutput.com/preview/Content/2-Using-Kahua/System-Settings/system-requir

Contractors must begin populating required contract data within 7 calendar days of receipt of the Notice to Proceed or within 7 calendar days of receiving access to the contract in CMP. CMP user guidance, access instructions, updates, and training information will be provided by the Government. The common database will be updated each time a user saves an entry or change.

Notify the Contracting Officer of departing personnel immediately, not to exceed 72 hours after their departure for removal from CMP.

Log in to CMP at least every 35 days to maintain active user account.

1.4 CONSTRUCTION CONTRACT SYSTEM OF RECORD

The construction contract system of record for this contract is the system designated by the Contracting Officer and administered by the administering District. The construction contract system of record is either the Resident Management System (RMS) or the Construction Management Platform (CMP).

1.4.1 System of Record Transition

Refer to Section 01 45 00.15 10 RESIDENT MANAGEMENT SYSTEM CONTRACTOR MODE (RMS CM) for the requirements associated with the Construction Contract system of record transition from RMS CM to CMP.

1.4.2 Training

Recorded and written CMP training will be available through the Construction Management Administration Application (CMA²) located at: https://cm-usace.erdc.dren.mil/category/c0f6918b-0f46-48a8-a74f-d340e0c05bc6.

1.5 CONTRACT ADMINISTRATION

The Government will use CMP to manage and administer this contract. The Government and the Contractor will have different access authorities (roles or permissions) to the same contract database within CMP. The joint Government-Contractor use of CMP facilitates electronic exchange of information and overall management of the contract. Unless otherwise noted, use CMP to provide all data submissions required within this contract's specification, to include template forms and letters when available.

The Contractor accesses CMP to record, maintain, input, track, and electronically share information with the Government throughout the contract period via the following applications and application suites:

a. Administration

b. Document Management

c. Field Management

d. Cost Management

1.5.1 Correspondence And Electronic Communications

Manage contract correspondence and electronic communications as follows:

Exchange correspondence and other documents in electronic format via CMP to the maximum extent feasible. Digitally sign all records requiring signatures in CMP.

Create, transmit, and track all official contract correspondence within CMP such that the system reflects current correspondence status (including attachments and related records).

When the Contracting Officer requires paper documents with original signatures, provide the paper originals as directed and upload a PDF copy to CMP. Where an electronic copy is also used, the paper document governs in the event of discrepancy.

1.5.2 Other Factors

Other portions of this contract directly apply to the data entry requirements in the construction contract system of record. Direct particular attention to FAR 52.236-15 SCHEDULES FOR CONSTRUCTION CONTRACTS; FAR 52.232-27 PROMPT PAYMENT FOR CONSTRUCTION CONTRACTS; FAR 52.232-5 PAYMENTS UNDER FIXED-PRICED CONSTRUCTION CONTRACTS; Section 01 32 01.00 10 PROJECT SCHEDULE; Section 01 33 00 SUBMITTAL PROCEDURES; Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS; and Section 01 45 00 QUALITY CONTROL

1.6 CMP CONTRACT DATABASE

The Government and the Contractor will use the same contract database within CMP with appropriate permissions.

The Government will enter the basic contract award data in CMP prior to granting the Contractor access. Government entries applicable to the contractor in CMP will generally be related to submittal reviews, correspondence status, and Quality Assurance (QA), as well as other miscellaneous administrative information.

Contractor entries in CMP must establish, maintain, and update data throughout the duration of the contract. Contractor entries generally include, but are not limited to, prime and subcontractor information, daily project data and associated information, quality control activities, submittals, requests for information (RFI), schedule updates, and payment requests.

1.6.1 Administration

The Contractor responsibilities for entries in CMP include but are not limited to the following items:

1.6.1.1 Contractor Information

Contractor's name, address, telephone number(s), management staff, and all required data fields in the Company and Contacts, Project, Project Directory, and other applications within CMP.

1.6.1.2 Subcontractor Information

Enter all subcontractor administrative data and information into CMP within 7 calendar days of receiving access to the contract in CMP or within 7 calendar days of signing the subcontract agreement. This includes name, trade, address, phone number(s), and other required information for all subcontractors. List subcontractors separately for each individual trade to be performed.

For each subcontractor, enter name, trade, address, phone number(s), and other required information within seven calendar days of signing the subcontract agreement. List subcontractors separately for each individual

trade to be performed.

1.6.1.3 Correspondence

Identify all Contractor correspondence to the Government with a serial number. Prefix correspondence initiated by the Contractor's office with "S". Number letters starting from 0001 (e.g., S-0001). The Government's letters to the Contractor are prefixed with "C". Request for Proposals are generated in CMP and prefixed with "RFP".

1.6.1.4 Equipment

Enter and maintain a current list of equipment planned for use or being used on the project site, including the most recent and planned equipment inspection dates in accordance with Section 01 45 00 QUALITY CONTROL.

1.6.1.5 Data, Reports and Templates

Track the status of the project using analytics, dashboards, and reports available in CMP. These data tracking tools include but are not limited to weekly progress analytics, daily reports, Deficiency Tracking Log, Submittal Register Status, and Schedule and Progress Payment reporting. Where data can be entered in CMP, use the applicable output templates available in CMP for activities such as meetings, submittals, safety submissions and reporting, progress payments, preconstruction documents, and similar project deliverables.

When other specifications in this contract require the use of an ENG Form which is integrated in CMP as a template, enter the data directly into CMP instead of filling out the ENG Form and submitting as a PDF.

1.6.2 Document Management

Use the CMP Document Management applications suite to perform contract management functions specifically related to the management and distribution of information including drawing and specifications, RFIs, Submittals, correspondence, and other contract documents.

1.6.2.1 BIM

When other sections of this contract require Advanced Modeling, upload all BIM and other model files to the File Manager application in CMP. Use the BIM application to view, compare, and annotate advanced model files.

When the contract requires Government collaboration, upload all advanced modeling files to CMP. Pin all related CMP records to the current BIM files.

1.6.2.2 Correspondence

This application is the central log for all contract-related communications. All official contract correspondence must occur in CMP.

1.6.2.3 Design Review

This application streamlines and enhances document reviews, including drawings, models, specifications and reports, and utilizes markups, annotations, and review and approval workflow to track progress and backcheck comments.

Initiate, manage and conduct all design reviews in CMP.

1.6.2.4 File Manager

Store project documentation not contained elsewhere in the system in an organized format. File manager includes version history, viewing, markup, and external sharing capabilities.

All contract files not housed in a specific application, such as RFIs, Submittals, or Correspondence, must be stored in the File Manager application.

1.6.2.5 Media Manger

Upload and store all contract photos and videos in the Media Manager application.

1.6.2.6 Meetings

Use this application to set up meetings, create agendas, record meeting minutes, track attendance, and assign and track items to be completed.

Schedule and document all meetings held with the Government in the CMP Meetings application. This includes, but is not limited to, meeting agendas, minutes, and action items.

1.6.2.7 Submittals

Use the "Submittal Register/Items" and Submittal Packages applications to create, track, manage, and markup submittals. Manage all project submittals in CMP in accordance with Section 01 33 00 SUBMITTAL PROCEDURES.

Use the "Submittal Register/Items" application to update, maintain and track the contract submittal items. The Government will provide the initial project submittal register. Update and maintain the submittal register daily in CMP.

Use the Submittal Packages application to package and transmit submittals to the Government for review and manage the submittal workflow. Where referenced elsewhere in this contract, the terms submittal transmittals and ENG Form 4025 are synonymous with Submittal Packages in CMP. Group submittal items from the same specification into submittal packages for Government review. When samples, spare parts, mock-ups, color boards or hard copies are specifically required, provide documentation in the submittal package indicating that the physical submittal was transmitted. Do not group submittal items with variations in the same submittal package as submittal items without a variation request.

Contractors may request submittal items be added to CMP throughout the lifecycle of the project. Approval and disapproval of Contractor requests are at the discretion of the Contracting Officer.

1.6.2.8 Requests for Information (RFIs)

Create, submit, and track all RFIs for Government review and response in the RFI application. RFIs must include a description with specific contract references, the information requested, a contractor

recommendation, potential cost and or schedule impacts, linked schedule activity (if applicable), and any relevant reference files. Review the status of RFIs in the weekly progress meeting in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE.

1.6.2.9 Risk Register

Use this application to track potential contract budget or schedule risks including summary reports and heat maps.

1.6.2.10 Scheduling

Submit all schedules for Government review as required in Section 01 32 01.00 10 in the CMP Scheduling application and not in the Submittals application. Schedule submission, review, and workflow will occur in the Scheduling application following all requirements of Section 01 33 00 Submittals. Link schedule activities in the Scheduling application with applicable CMP records including, but not limited to, documents, RFIs, deficiencies, daily report entries, issues, and all submittal register items.

1.6.2.11 Work Packages

Use this application to update and maintain workflow for Design Reviews, RFIs, Submittals and other applications based on required personnel, document type and discipline combination. Designate the appropriate personnel required for each workflow in accordance with personnel requirements established in other sections of the contract.

1.6.3 Field Management

Use the CMP Field Management Application suite to manage safety, quality, and other functions as required by the contract.

1.6.3.1 Forms

Use the form templates to complete the required contract documentation forms, for submission and review by the government. Develop additional form templates as appropriate for documenting and tracking contract required information in CMP.

At a minimum, complete the following form templates in CMP and submit to the Government:

1.6.3.1.1 Accident Prevention Plan (APP)

Use the application to identify potential hazards and outline the measures that will be taken to prevent accidents and ensure a safe working environment in accordance with the EM 385-1-1. Create, submit and maintain the Accident Prevention Plan (APP) in CMP.

1.6.3.1.2 Contractor Quality Control Plan (QCP)

Use the application to complete and maintain the contract required QCP and design quality control plan. Provide data for all fields, in accordance with the requirements of Section 01 45 00 Quality Control and Section 01 33 16.00 10 Design Data (Design After Award). Select the complete form and attach the DFOW list when creating the QCP submittal in CMP.

1.6.3.1.3 Activity Hazard Analysis (AHA)

Develop or upload, review, submit, and maintain for Government review and acceptance an AHA for each work activity, task, or definable feature of work (DFOW) in CMP in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and EM 385-1-1. Link the reviewed and accepted AHAs to all associated Three Phase Inspections in CMP prior to scheduling the Preparatory Phase Meeting.

1.6.3.2 Closeout

Use this application to track all tasks and activities required to closeout the project.

Use the CMP Closeout application to manage project red zone and closeout activities including all required contract deliverables, to include but not limited to, O&M manuals, as-built drawings, spare parts, administrative closeout, transfers of construction, warranty, and remediation of all deficiencies.

Maintain and link all applicable records to the redline drawings in CMP as required in Section 01 45 00 QUALITY CONTROL and Section 01 78 00 CLOSEOUT SUBMITTALS.

1.6.3.3 Commissioning

Use this application to manage the commissioning process including equipment lists, pre-functional checklists, and functional performance tests.

Manage all commissioning documentation in CMP. Develop commissioning documentation (checklists, test reports, etc.) directly in CMP or upload as complete PDFs in the Commissioning application for the record and Government review. Create or provide all required commissioning documentation in accordance with the applicable contract specification sections.

1.6.3.4 Deficiencies

Use this application to create, track, and resolve quality, safety and environmental deficiencies, document punch list inspections, and manage the process through correction and verification. Document all deficiencies as applicable in Sections 01 45 00 QUALITY CONTROL, 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS, 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS and the EM 385-1-1.

Identify, enter, track, and resolve deficiencies in CMP, including those entered by the government, and manage resolution to completion. Pin the location of all deficiencies and punch list items to drawing within CMP. Link each deficiency to the applicable schedule activity. Payment will not be made for activities with unresolved deficiencies. Capture and upload photographs of the deficiencies and obtain the government concurrence or verification of the remediation. Use the Deficiencies application to document all punch-out inspections and pre-final or final inspections, in accordance with specification Section 01 45 00 QUALITY CONTROL.

1.6.3.5 Definable Features of Work (DFOW)

Use this application to create, submit, and finalize the contract DFOWs and link the appropriate DFOW to other records within CMP.

Link all project records, including but not limited to RFIs, Submittals, work performed, progress payment items, schedule activities and daily reports, to the associated DFOW.

1.6.3.6 Field Observations

Use this application to capture all actionable quality, safety, and environmental field observations. Pin the location on the drawings, assign responsibility, and track to resolution all Field Observations, including those documented by the Government.

1.6.3.7 Mishap Reporting

Provide all information and documentation pertaining to accident, near miss and injury reporting in the Mishap Reporting application. Enter all required ENG Form 3394 data in the system for Near Miss, Initial Accident Reports, and Final Accident reports, and attach all reference documentation pertinent to the mishap investigation as required by the Contracting Officer. Follow all reporting requirements for accidents and incidents as required in EM 385-1-1, Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS, and as required by any other applicable federal, state, or local agencies.

1.6.3.8 Inspections

Use this application to catalog all required project inspections and testing. Assign a responsible individual to track each inspection to completion.

All project inspections, including but not limited to, safety inspections, material inspections, inspections of completed work, QC and third-party testing must be documented and managed in this application. Include documentation of any required corrective actions.

1.6.3.9 Daily Reports

Use this application to record and document all daily activities on the project, including weather, labor, equipment, and materials.

Enter Daily Reports in CMP and submit for review in accordance with Section 01 45 00 QUALITY CONTROL and Section 01 35 26 GOVERNMENTAL SAFETY REQURIEMENTS.

Update data and documentation in CMP daily, including but not limited to, QC documentation, RFIs, submittals, and modifications. CMP includes an analytics functionality to consolidate the necessary data from all applications into the Daily Summary Report.

1.6.3.10 Three-Phase Quality Control

Use this application to manage the Preparatory, Initial, and Follow-Up phases for all Definable Features of Work.

Use the Three-Phase Quality Control application to track all activities

and documentation for each DFOW including preparatory phase meeting, initial inspection, and follow-up inspection. Document the agendas and minutes for the preparatory phase, all inspection documentation, test reports, and location for all initial and follow-up inspections, and link applicable references to the appropriate CMP record.

1.6.4 Cost Management

Use the CMP Cost Management application suite to manage contract financial interaction with the Government.

1.6.4.1 Contract Transfer - DD Form 1354

This application provides the ability to leverage facility and contract data to create a DD Form 1354. Use the DD Form 1354 application to create the draft, interim, and final versions of DD Form 1354 and manage the review workflow

1.6.4.2 Issues And Potential Changes

Use this application to log and track to resolution of all issues that have potential impacts to the project. Records generated in their respective CMP applications (such as RFIs or deficiencies) may be processed into an Issue when escalation is required for resolution.

Issues that result in a contract change will be processed into a potential change, and documentation tracked within this application. Provide proposal information in response to requests for proposal within the application in accordance with all applicable contract and FAR clause requirements. This includes but is not limited to cost and time impact information as data and an attached PDF containing required backup documentation.

1.6.4.3 Progress Payments

Use this application to create, submit, review and track progress and final payments. Update the work completed under the Contract at least monthly, measured as percent or as specific quantities. Input the draft Schedule of Values (SOV) amounts into the application and submit the pencil copy of the cost-loaded SOV for Government review and concurrence based on actual progress and requested pay amounts per activity. Utilize the application to track total amounts invoiced to date for each line item, withholdings, stored materials, and executed contract changes.

Incorporate the Government-approved draft SOV into the formal periodic schedule update submission in accordance with Section 01 32 01.00 10 PROJECT SCHEDULE. Upon completion of the Government periodic schedule review, CMP will integrate approved cost-loaded SOV data into the Progress Payment application. Use this imported data to create the formal progress payment request and generate the prompt payment certification directly within the application. Complete the process by submitting the signed prompt payment certification, the formal payment request, and all supporting reference documentation through the application.

1.7 IMPLEMENTATION

Use of the construction contract system of record as described in the preceding paragraphs is mandatory. Ensure sufficient resources are available to maintain contract data within the system. The system is an

integral part of the Contractor's required contract management and quality control.

1.8 NOTICE OF NONCOMPLIANCE

Take corrective action within 7 calendar days after receipt of notice of noncompliance by the Contracting Officer.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION TABLE OF CONTENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS

PART 1 GENERAL

1.1 REFERENCES
1.2 SUBMITTALS
1.3 CONSTRUCTION SITE PLAN
1.4 BACKFLOW PREVENTERS CERTIFICATE
1.4.1 Backflow Tester Certificate

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE
2.1.1 Warning Signs
2.2 TEMPORARY TRAFFIC CONTROL
2.2.1 Haul Roads
2.2.2 Barricades
2.3 FENCING
2.4 TEMPORARY WIRING
2.5 BACKFLOW PREVENTERS

PART 3 EXECUTION

3.1 AVAILABILITY AND USE OF UTILITY SERVICES
3.1.1 Temporary Utilities
3.1.2 Sanitation
3.1.3 Telephone
3.1.4 Fire Protection
3.2 TRAFFIC PROVISIONS
3.2.1 Maintenance of Traffic
3.2.2 Protection of Traffic
3.2.3 Dust Control
3.3 REDUCED PRESSURE BACKFLOW PREVENTERS
3.4 CONTRACTOR'S TEMPORARY FACILITIES
3.4.1 Administrative Field Offices
3.4.2 Storage Area
3.4.3 Appearance of Trailers
3.5 TEMPORARY PROJECT SAFETY FENCING
3.6 CLEANUP
3.7 RESTORATION OF STORAGE AREA

-- End of Section Table of Contents --

THIS PAGE INTENTIONALLY LEFT BLANK

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS

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.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2026; TIA 26-1; ERTA 26-1; TIA 26-2; TIA 26-3; TIA 26-4; TIA 26-5; TIA 26-6; TIA 26-7; ERTA 26-2; ERTA 26-3) National Electrical Code
NFPA 241	(2022; ERTA 22-1) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2024) Safety -- Safety and Occupational Health (SOH) Requirements

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD	(2023) Manual on Uniform Traffic Control Devices

1.2 SUBMITTALS

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

SD-01 Preconstruction Submittals

Construction Site Plan; G

Traffic Control Plan; G

Haul Road Plan; G

SD-06 Test Reports

Backflow Preventer Tests

SD-07 Certificates

Backflow Tester Certification

Backflow Preventers Certificate of Full Approval

1.3 CONSTRUCTION SITE PLAN

Prior to the start of work, submit for Government approval a Construction Site Plan. The plan must identify and detail the following:

a. The primary off-site storage yard(s), showing the layout for the Contractor's office, equipment and material storage, temporary sanitary facilities, trash dumpsters, and designated worker parking.

b. Access and haul routes from the storage yard(s) to the project areas. Identify stabilized construction entrances designed to prevent the tracking of mud onto public roadways.

c. A typical work area layout showing the placement of safety fencing, traffic control devices, and erosion controls relative to a definable feature of work (e.g., an open trench).

1.4 BACKFLOW PREVENTERS CERTIFICATE

1.4.1 Backflow Tester Certificate

Prior to testing, submit to the Contracting Officer certification issued by the State or local regulatory agency attesting that the backflow tester has successfully completed a certification course sponsored by the regulatory agency. Tester must not be affiliated with a company participating in other phases of this Contract. The certificate must be current.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards according to the EM 385-1-1. Attach signs to the perimeter fencing every 150 feet warning the public of the presence of construction hazards.

2.2 TEMPORARY TRAFFIC CONTROL

2.2.1 Haul Roads

Construct access and haul roads necessary for proper prosecution of the work under this Contract in accordance with EM 385-1-1. Construct with suitable grades and widths; avoid sharp curves, blind corners, and dangerous cross traffic. Submit haul road plan for approval. Provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, must be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and haul roads are subject to approval by the Contracting Officer. Lighting must be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations.

2.2.2 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. Barricades are required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

2.3 FENCING

Provide fencing along the construction site and at all open excavations and tunnels to control access by unauthorized personnel. Safety fencing must be highly visible to be seen by pedestrians and vehicular traffic. All fencing must meet the requirements of EM 385-1-1. Remove the fence upon completion and acceptance of the work.

2.4 TEMPORARY WIRING

Provide temporary wiring in accordance with EM 385-1-1, NFPA 241 and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

2.5 BACKFLOW PREVENTERS

Provide backflow preventers of type, design, size, and/or make conforming to requirements of the State or local regulatory authority. Backflow preventers must include certification of performance testing/evaluation in accordance with requirements of the governing authority.

PART 3 EXECUTION

3.1 AVAILABILITY AND USE OF UTILITY SERVICES

3.1.1 Temporary Utilities

The Contractor must provide their own utilities. Provide temporary utilities required for construction. Materials must be adequate for the required usage, not create unsafe conditions, and not violate applicable codes and standards.

3.1.2 Sanitation

Provide and maintain within the construction area minimum field-type sanitary facilities in accordance with EM 385-1-1. Locate the facilities behind the construction fence or out of the public view. Clean units and empty wastes at least once a week or more frequently into a municipal, district, or station sanitary sewage system, or remove waste to a commercial facility. Obtain approval from the system owner prior to discharge into a municipal, district, or commercial sanitary sewer system. Penalties or fines associated with improper discharge will be the responsibility of the Contractor. Coordinate with the Contracting Officer and follow station regulations and procedures when discharging into the station sanitary sewer system. Maintain these conveniences at all times. Include provisions for pest control and elimination of odors. Government toilet facilities will not be available to Contractor's personnel.

3.1.3 Telephone

Make arrangements and pay all costs for telephone facilities desired.

3.1.4 Fire Protection

Provide temporary fire protection equipment for the protection of personnel and property during construction. Remove debris and flammable materials to minimize potential hazards.

3.2 TRAFFIC PROVISIONS

3.2.1 Maintenance of Traffic

Manage all traffic control in close coordination with the Town of Weaverville and the North Carolina Department of Transportation (NCDOT).

a. Coordinate with the Town of Weaverville and NCDOT to secure all necessary approvals for work within the public right-of-way. At least 30 calendar days prior to the start of any work impacting traffic, submit a detailed, site-specific Traffic Control Plan for Government approval detailing the proposed controls to traffic movement for approval and for subsequent approval by the responsible road authority. The plan must be developed by a certified Work Zone Traffic Control Supervisor and comply with MUTCD,Part VI and the NCDOT Work Zone Traffic Control Guidance. Contractor may move oversized and slow-moving vehicles to the worksite provided requirements of the highway authority have been met.

b. Conduct work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times unless otherwise approved in the Traffic Control Plan. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic. Notify the Town of Weaverville Public Works Department 48 hours prior to implementing any approved lane or road closure.

c. Provide, erect, and maintain, at Contractor's expense, lights, barriers, signals, passageways, detours, Life Safety Signage, overhead protection, and other items that may be required by the authority having jurisdiction.

d. Provide cones, signs, barricades, lights, or other traffic control devices and personnel required to control traffic. Do not use foil-backed material for temporary pavement marking because of its potential to conduct electricity during accidents involving downed power lines.

3.2.2 Protection of Traffic

Maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment the work, and the erection and maintenance of adequate warning, danger, and direction signs, will be as required by the State and local authorities having jurisdiction. Provide self-illuminated (lighted) barricades during hours of darkness. All personnel working in roadways will wear brightly-colored vests or other

high visibility apparel in accordance with EM 385-1-1. Protect the traveling public from damage to person and property. Minimize the interference with public traffic on roads selected for hauling material to and from the site. Investigate the adequacy of existing roads and their allowable load limit. Contractor is responsible for the repair of damage to roadways, curbs, sidewalks, or shoulders caused by its operations, to the satisfaction of the responsible road authority.

3.2.3 Dust Control

Dust control methods and procedures must be approved by the Contracting Officer. Coordinate dust control methods with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

3.3 REDUCED PRESSURE BACKFLOW PREVENTERS

Provide an approved reduced pressure backflow prevention assembly at each location where the Contractor taps into the public potable water supply.

Perform backflow preventer tests using test equipment, procedures, and certification forms conforming to those required by the State or local regulatory authority. Test and tag each reduced pressure backflow preventer upon initial installation (prior to continued water use) and at recurrent intervals required by the State or local regulatory authority thereafter. Tag must contain the following information: make, model, serial number, dates of tests, results, maintenance performed, and signature of tester. Record test results on certification forms conforming to requirements cited earlier in this paragraph.

3.4 CONTRACTOR'S TEMPORARY FACILITIES

Contractor is responsible for security of their property. Construction Office Trailers must be anchored to resist high winds and meet applicable state or local standards for anchoring mobile trailers. Coordinate anchoring with EM 385-1-1. The Contract Clause entitled "FAR 52.236-10, Operations and Storage Areas" and the following apply:

3.4.1 Administrative Field Offices

Provide and maintain any required administrative field office facilities within the construction area at the designated laydown site. Town of Weaverville office and warehouse facilities will not be available to the Contractor's personnel.

3.4.2 Storage Area

Construct a temporary (minimum 6 foot high) chain link fence around trailers and materials at the designated laydown site. Include visual screening, so that visibility through the fence is obstructed. Fence posts may be driven, in lieu of temporary bases, where soil conditions permit. Do not place or store trailers, materials, or equipment outside the fenced area unless such trailers, materials, or equipment are assigned a separate and distinct supplemental storage area by the Contracting Officer away from the vicinity of the designated laydown site but within the limits of the consturction work. Trailers, equipment, or materials must not be open to public view with the exception of those items which are in support of ongoing work on the current day. Except for limited exceptions approved by the Contracting Officer, do not stockpile materials outside the fence in preparation for the next day's work or park mobile

equipment, such as tractors, wheeled lifting equipment, cranes, trucks, excavators, and like equipment outside of the fenced area at the end of each work day.

Keep fencing in a state of good repair and proper alignment. If the Contractor elects to traverse grassed or unpaved areas which are not established roadways with construction equipment or other vehicles, cover the grassed or unpaved areas with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation must be at the Contractor's discretion. Mow and maintain grass located within the boundaries of the construction site for the duration of the project. Grass and vegetation along fences, structures, under trailers, and in areas not accessible to mowers must be edged or trimmed neatly.

3.4.3 Appearance of Trailers

a. Trailers must be roadworthy and comply with all appropriate state and local vehicle requirements. Trailers which are rusted, have peeling paint or are otherwise in need of repair will not be allowed. Trailers must present a clean and neat exterior appearance and be in a state of good repair.

b. Maintain the temporary facilities. Failure to do so will be sufficient reason to require their removal at the Contractor's expense.

3.5 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, furnish and erect temporary project safety fencing at the work site. Maintain the safety fencing during the life of the Contract and, upon completion and acceptance of the work, remove from the work site.

3.6 CLEANUP

Remove construction debris, waste materials, packaging material and the like from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store all salvageable materials resulting from demolition activities within the fenced area described above or at the supplemental storage area. Neatly stack stored materials not in trailers, whether new or salvaged.

3.7 RESTORATION OF STORAGE AREA

Upon completion of the project remove the bulletin board, signs, barricades, haul roads, and all other temporary products from the site. After removal of trailers, materials, and equipment from within the fenced area, remove the fence. Restore areas used during the performance of the Contract to the original or better condition. Remove gravel used to traverse grassed areas and restore the area to its original condition, including top soil and seeding as necessary.

-- End of Section --