SECTION 01 11 00

SUMMARY OF WORK
11/21

PART 1 GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

1.1.1 Project Description

The Work includes HVAC, electrical, DDC control systems, plumbing (including compressed air and propane gas piping), architectural, HAZMAT cleaning and abatement, equipment relocation and incidental related Work. Specific tasks include, but are not limited to the following:

a. Cleaning and Abatement: Thoroughly clean areas affected by construction prior to demolition or equipment removal to remove Hexavalent Chromium (CrVI) contamination on all surfaces including shop equipment. Clean existing ducting within the affected shop areas, the office immediately adjacent to the shop areas, and 30" into the remaining lengths of ducting from the junction with the hallway wall towards the central fan locations. Remove hazardous material (HAZMAT) containing building components directly affected by construction. Protect all items remaining within the construction zone from recontamination. See Sections 02 41 00, 02 81 00, 2 82 00, 02 83 00, and 02 84 16 for specific HAZMAT handling, abatement and disposal requirements.

b. Temporary Shop Facilities: After cleaning and prior to demolition and repair activities, relocate designated aircraft maintenance shop equipment and tools to an area on the hangar floor identified by the USCG and set up the equipment for safe operation in the temporary shop location. Provide safe temporary electrical connections for all equipment and temporary tool air connections and air compressor. After construction completion, return the equipment to the designated shop locations and reinstall. See Sections 23 30 00 and 26 20 00 for specific requirements.

c. Architectural: Reconfigure existing sanding room to add Personal Protective Equipment (PPE) Don and Doff Rooms. Relocate paint room wall and doors within the metal shop for improved personnel access and aircraft part manuevering. Provide new partition and doors between hangar deck and shop areas to create vestibule in front of maintenance office. Provide demolition to support HVAC removal and replacement, and patching, painting, repair and restoration of interior and exterior structures and finishes damaged during construction activities.

d. Heating, Ventilation, and Air Conditioning (HVAC): Remove and replace make-up air units, exhaust fans, and ducting serving sanding and painting areas. Relocate louvers serving paint booth make-up air unit. Install new exhaust fans and ducting serving composite layup area and new Doff Room. New ducting shall be welded to prevent contaminant leakage. Remove and dispose of existing downdraft tables. Equip new government provided downdraft table with air curtain and install in reconfigured sanding room. Remove and replace replace fin tube heaters and unit heaters in shop areas.

e. Compressed Air: Reconfigure compressed air systems to provide separate tool and breathing air systems serving the sanding room and paint booth areas. Install new tool air compressor and one government provided breathing air compressor.

f. Propane Gas: Replace propane gas piping from existing outside tank to new paint booth make up air unit.

g. Controls: Provide Direct Digital Control (DDC) systems to monitor and control new equipment and pressure gradients between clean and dirty areas at all times, whether or not sanding, composite layup, and paint booth fan systems are in use. Integrate controls into existing facility DDC system.

h. Electrical: Provide panels, circuits, lighting, wiring, conduit and other electrical fixtures and items to serve new fan systems, controls, tools and equipment layouts. This includes explosion proof fixtures where required, and temporary electrical connections serving the equipment items in the temporary shop area.

i. Testing, Adjusting, and Balancing (TAB): Complete TAB on all fan systems, ducting and piping added or modified during this project prior to commissioning. Pre TAB central supply and return ducting prior to commencing construction activities to baseline air flows to and from shop areas.

j. Commissioning: Commission all new systems installed and their interoperability with existing systems such as HVAC and DDC controls.

1.1.2 Location

The Work is located at U.S. Coast Guard Air Station Sitka (AIRSTA SITKA)in the AIRSTA SITKA Hangar, in Sitka, Alaska. The exact location will be shown by the Contracting Officer.

1.1.3 Applicable Codes and Regulations

The following provides a general summary of the codes and regulations applicable to this Project, but is not intended to be a comprehensive list of all applicable codes, standards, and regulatory requirements this Project shall comply with. Refer to the Reference article of each section included in these Specifications and comply with **ALL** requirements specified. Unless specifically noted otherwise or directed otherwise by the Contracting Officer, use the most recent version of each code listed below:

a. International Building Code (ICC IBC)

b. ASCE 7-16

c. International Mechanical Code (ICC IMC)

d. International Plumbing Code (ICC IPC)

f. International Energy Conservation Code (ICC IECC)

e. National Electrical Code (NFPA 70)

g. ASHRAE Energy Standard for Buildings I-P Edition (ASHRAE 90.1 - IP)

h. OSHA Occupational Safety and Health Standards (29 CFR 1910)

i. OSHA Safety and Health Regulations for Construction (29 CFR 1926)

j. National Fire Code (NFPA 1)

k. National Life Safety Code (NFPA 101)

l. International Fuel Gas Code (ICC IFGC)

m. Accessible and Usable Buildings and Facilities (ICC/ANSI A117.1)

In addition, comply with instructions in CEU TOPL_CrVI Threshold Guidance provided in Attachment 5, SILC-CSTO-36-71 91 11 13-07 Aviation Corrosion Control Facilities (CCF) (Rve A) provided in Attachment 6, all local amendments to the above listed codes as well as all local building and construction codes and standards including, but not limited to: City and Borough of Sitka General Code Title 14 - Streets and Sidewalks (SITKA GC TITLE 14) and City and Borough of Sitka General Code Title 19 - Building and Construction (SITKA GC TITLE 19). .

1.2 REFERENCES

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

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-7	Permits and Responsibilities
FAR 52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements
FAR 52.236-21	Specifications and Drawings for Construction
FAR 52.245-1	Government Property

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7-16	(2017; Errata 2018; Supp 1 2018) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 90.1 - IP	(2013) Energy Standard for Buildings Except Low-Rise Residential Buildings

CITY OF SITKA (SITKA)

SITKA GC TITLE 14	City and Borough of Sitka General Code Title 14 - Streets and Sidewalks

SITKA GC TITLE 19	City and Borough of Sitka General Code Title 19 - Building and Construction

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC	(2018) International Building Code
ICC IECC	(2015) International Energy Conservation Code
ICC IFGC	(2018) International Fuel Gas Code
ICC IMC	(2018) International Mechanical Code
ICC IPC	(2018) International Plumbing Code
ICC/ANSI A117.1	(2009) Accessible and Usable Buildings and Facilities

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 1	(2018) Fire Code
NFPA 70	(2017; ERTA 1-2 2017; TIA 17-1; TIA 17-2; TIA 17-3; TIA 17-4; TIA 17-5; TIA 17-6; TIA 17-7; TIA 17-8; TIA 17-9; TIA 17-10; TIA 17-11; TIA 17-12; TIA 17-13; TIA 17-14; TIA 17-15; TIA 17-16; TIA 17-17) National Electrical Code
NFPA 101	(2018; TIA 18-1; TIA 18-2; TIA 18-3) Life Safety Code

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

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction

1.3 DEFINITIONS AND ABBREVIATIONS APPLICABLE TO SPECIFICATIONS

Definitions specific to certain sections are further defined in their respective sections. Unless specifically noted otherwise or defined by a different Specification Section, the following words and abbreviations have the general meaning defined below for the technical portions of the Work:

Architect-Engineering (A/E and AE) Firm: The firm responsible for preparing Construction Contract documents (drawings and technical specifications) and serving as the Designer of Record (DOR).

As-Built Drawings: As-Built Drawings are developed and maintained by the Contractor and depict actual conditions, including deviations from the Contract Documents. These deviations and additions may result from coordination required by, but not limited to: Contract modifications; official responses to Contractor submitted Requests for Information; direction from the Contracting Officer; designs which are

the responsibility of the Contractor, and differing Site conditions. Maintain the as-builts throughout construction as red-lined hard copies on-site and red-lined PDF files. These files serve as the basis for the creation of the Record Drawings.

Base Facilities Engineer (FE): The local Installation personnel responsible for management of Systems. In some cases, the Contracting Officer may designate a FE to review, oversee, approve certain aspects of the Work such as Operation and Maintenance manuals and Training.

Civil Engineering Unit (CEU): The U.S. Coast Guard Civil Engineering Unit detachment. For U.S. Coast Guard District 17 projects, assume this is CEU Juneau.

Contract: The term "Contract" refers to the binding agreement between the Government and the Contractor and all associated and referenced documents including but not limited to Task Orders, Drawings, Specifications, Amendments, Modifications, and Addenda.

Contracting Officer (KO): The Government official having overall authority for administrative contracting actions. Certain contracting actions may be delegated to the Contracting Officer's Representative (COR).

Contractor (KR): The primary firm or group responsible for execution of the Work.

Contractor's Quality Control (QC) Manager: An individual retained by the Prime Contractor and qualified in accordance with the Section 01 45 00 QUALITY CONTROL having the overall responsibility for the Contractor's QC organization.

Day(s): Calendar day(s), unless otherwise indicated.

Designer of Record (DOR): A registered design professional contracted by the Government as an A/E responsible for the overall design and review of submittal documents prepared by others. The DOR is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in state in which the design professional works. The DOR is also referred to as the Engineer of Record (EOR) in design code documents.

FDCC: The U.S. Coast Guard Facilities Design & Construction Center. For U.S. Coast Guard District 17 projects, assume this is FDCC Seattle.

Foreign object debris (FOD): An object, live or not, located in an inappropriate location which has the capacity to cause injury or damage equipment or assets. Control of FOD is of particular importance for Work that occurs on or near airfields and in proximity to aircraft.

Furnish: To supply and deliver to the Site, to unload and unpack ready for assembly, installation, testing, and start-up.

Government: The agency (and their Facility Partners) serving in capacity as the Owner or Client. For U.S. Coast Guard projects, assume the term "Government" indicates U.S. Coast Guard (USCG).

Government Contracting Officer's Representative (COR): A representative appointed by the Contracting Officer to oversee specific aspects of the Contract and Work.

Government Construction Project Manager (CPM or CI): In some cases the Government may appoint a separate person (other than the COR) to oversee the Work.

Indicated: Used to direct the Contractor to information contained on the Drawings or in the Specifications. Terms such as "shown," "noted," "scheduled," "specified," and "defined" also may be used to assist in locating information but no limitation of location is implied or intended.

Install: Defines operations at the Site including assembly, erection, placing, anchoring, applying, shaping to dimension, finishing, curing, protecting, and cleaning, ready for the U.S. Coast Guard use.

Installation: When used to indicate a location, the term "Installation" is defined as the site owned or operated by the U.S. Coast Guard where the Project Work will occur. As used by these Project Specifications, "Installation" refers to U.S. Coast Guard AIRSTA SITKA.

Installer: Defines a person or firm engaged by the Contractor or any subcontractor to execute a specific portion of the Work.

Personal Protective Equipment (PPE): Refers to protective clothing, helmets, goggles or other garments and equipment designed to protect the wearer from injury.

Project: The Contracted Work to be performed.

Provide: To furnish and install, ready for intended use.

Quality Assurance (QA): The systems and methods employed by the Government as required to ensure the Work is executed per the Contract and applicable standards.

Quality Control (QC): The systems and methods employed by the Contractor as required to ensure the Work is executed per the Contract and applicable standards.

Record Drawings: The Record Drawings are the final compilation of actual conditions reflected in the As-Built Drawings.

Request for Information (RFI): Request provided by the Contractor to the Government to clarify requirements of the Contract documents.

Subcontractor: Defines a person or firm engaged by the prime Contractor or any of their subcontractors.

United States Coast Guard (USCG): The U.S. Coast Guard, this term is used interchangeably with "Government" in these Specifications.

Work: The term "Work" refers to all aspects of the Project.

1.4 CONTRACTING OFFICER'S AUTHORITY

In no event shall any understanding or agreement between the Contractor and any Government employee other than the Contracting Officer on any Contract, modification, change order, letter or verbal direction to the Contractor be effective or binding upon the Government. All such actions must be formalized by a proper contractual document executed by an appointed Contracting Officer. The Contractor is hereby put on notice that in the event a Government employee, other than the Contracting Officer, directs a change in the Work to be performed, or increases the Scope of the Work to be performed, it is the Contractor's responsibility to make inquiry to the Contracting Officer before making the deviation. Payments will not be made without being authorized by an appointed Contracting Officer with the legal authority to bind the Government.

1.5 CONTRACTOR RESPONSIBILITY

This Contract contains prescriptive criteria. The subsequent construction shall incorporate all ancillary components as necessary to provide a complete and functional facility for the intended purpose. Where direction is given, it is directed to the Contractor. In each case the meaning is as though written "the Contractor shall."

1.6 CONFLICTS

Where Specifications or standards documents are referenced in these Contract documents, they apply as if they were incorporated into the Contract, except if specifically noted otherwise. If there are differences between referenced documents and any Contract documents see FAR 52.236-21 Specifications and Drawings for Constructionand notify the Contracting Officer of any discrepancies.

1.7 GENERAL WORKING CONDITIONS

Working conditions for this Work are based on typical weather information and established engineering data as follows; the Contractor shall verify actual conditions based on established databases (e.g., ASCE 7-16, National Weather Service, NOAA, etc.). The following information is intended to provide a Project baseline for preliminary scheduling and design considerations. The following information should **NOT** be used for final design or materials/installation requirements. The following also includes weather data reflecting established normals, the weather data listed below is not intended reflect record extremes (e.g., record high/low temperatures). Contractor shall verify actual conditions and refer to the Technical Specifications for design and materials/installation requirements.

1.7.1 Wind

1.7.1.1 Prevailing Wind

Prevailing wind information is based on data as published by Iowa State University's Iowa Environmental Mesonet at https://mesonet.agron.iastate.edu/sites/locate.php?network=AK_ASOS, select a station and then select the "Wind Rose" tab.

Southeast at 7.1 knots (8.2 MPH)

1.7.1.2 Design Wind Speed

Design wind speed shall be per ASCE 7-16.

a. Risk Category II: 149 MPH

b. Risk Categories III: 158 MPH

c. Risk Category IV: 166 MPH

1.7.2 Temperature and Precipitation

Temperature and precipitation information below is based on data as published by the Alaska Climate Research Center: http://climate.gi.alaska.edu/Climate/Normals

1.7.2.1 Temperature

a. Maximum Temperature: 61.9 Degrees F

b. Minimum Temperature: 32.1 Degrees F

c. January Average Mean Temperature: 36 Degrees F

d. July Average Mean Temperature: 56 Degrees F

1.7.2.2 Precipitation

1.7.2.2.1 Annual Precipitation

a. Average Annual Precipitation: 86.8 Inches

b. Maximum Annual Precipitation: 122.96 Inches

1.7.2.2.2 60 Minute Duration Rainfall Rates

a. 25 Year Normal: .88 Inch/Hour

b. 100 Year Normal: 1.10 Inch/Hour

1.7.3 Snow and Frost Data

1.7.3.1 Snow Loads

Snow loads indicated are based on ICC IBC, ASCE 7-16, and data available from the City of Sitka (see SITKA GC TITLE 19).

a. Ground Snow Load: 50 PSF

b. Roof Snow Load: Roof snow loads shall be calculated per ICC IBC and ASCE 7-16, also refer to SITKA GC TITLE 19 for additional requirements.

1.7.3.2 Frost Protection

General frost protection information is provided below for water lines and is based on the minimum requirements of local building codes and city standards. **ALWAYS** verify required coverage for all items. The following is not intended to provide general coverage requirements for building structures (e.g., footings and foundations). Coverage requirements may also vary depending on the the type of utility and service.

Frost Protection: 5 FT Cover minimum, also refer to SITKA GC TITLE 14 and SITKA GC TITLE 19 for additional requirements.

1.7.4 Seismic Design Criteria

Seismic Design Criteria shall be per ASCE 7-16. Seismic Site Class and Soil Classification must be determined and confirmed by a Geotechnical Engineer prior to design. The following information provides the Seismic Design Category values based on ASCE 7-16. The following values should be verified and then used to help determine the Seismic Site Class and Soil Classification which establish minimum Project requirements.

a. S_S: 0.923

b. S_1: 0.602

1.8 SITE VISITS

If a formal Site visit is planned, it will be listed in the Task Announcement. Prebid/informal site visits are optional, at the Contracting Officer's discretion, and the Contractor shall be responsible for all expenses.

1.9 OCCUPANCY OF PREMISES

See section 01 14 00 WORK RESTRICTIONS for Work requirements in occupied facilities.

1.10 EXISTING WORK

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

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

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

1.11 PERMITS

Contractor's responsibility for permits is discussed in FAR 52.236-7

Permits and Responsibilities. In addition, the Contractor shall pay for and obtain all temporary permits for construction of this Contract Work. The Contractor shall comply with all terms and conditions of permits, whether the Contractor or the Government obtains the permit.

1.12 LOCATION OF UTILITIES

Locations of existing utilities indicated on site surveys, utility maps, and other Drawings are approximate only. The Government is not responsible for he accuracy of the information provided.

Contractor shall be responsible for locating and marking **ALL** utilities within the limits of construction and shall comply with State and local requirements for locating and marking underground utilities.

Contractor shall field verify accuracy of all existing utility locations whether shown or not on the Contract Drawings, within the Area of Work.

Contractor shall contact commercial utility companies direcly and the Contracting Officer to obtain all utility information (e.g., seam, potable water, deluge, sanitary sewer, power, telephone, cable TV, etc.).

Contractor shall obtain approval of all necessary permits with utility companies, U.S. Coast Guard, and any other regulatory agencies prior to excavating. See Sections 01 14 00 WORK RESTRICTIONS and 01 57 19 Temporary Environmental Controls for additional regulatory requirements related to excavation and digging.

1.13 GOVERNMENT-FURNISHED MATERIAL AND EQUIPMENT

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

DESIGNATION NO.	DESCRIPTION	QUANTITY
1. ~~[ ]~~	Shrouded Downdraft Table	1
2.	Air Compressor ~~[ ]~~	1 ~~[ ]~~

Quantities indicated for the above-listed items marked with an asterisk are estimates. It is the intention of the Government to furnish all quantities of the asterisk items required to complete the Work as specified, and the various quantities will be adjusted when necessary. Quantities stated for the above items not marked with an asterisk are all that will be furnished by the Government. Provide any additional quantities that are required.

1.13.1 Delivery Schedule

Notify the Contracting Officer in writing at least 10 calendar days in advance of the date on which the materials and equipment are required. Pick up materials and equipment no later than 5 calendar days after such date.

1.13.2 Delivery Location

The materials and equipment are located at the AIRSTA SITKA Hangar, on the Hangar floor and in the aircraft maintenance shop space.

PART 2 PRODUCTS

2.1 GENERAL

All products incorporated into this Work shall be brand new unless specifically indicated otherwise in the Project Drawings or the following technical Specification sections. The Contracting Officer shall have the authority to reject any defective or non-complying products.

Where not specifically indicated, the Contractor is responsible for determining or estimating the types, sizes, and quantities of products needed to complete all Work required in the Project Drawings and Specifications.

2.2 MANUFACTURER'S INSTRUCTIONS

Particular items and products specified in the sections are to be provided and/or installed according to the manufacturer's printed instructions. For bidding and Contract performance purposes, the Contractor is deemed to be aware of the requirements of these instructions.

2.3 COMMERCIAL AND LOCALLY AVAILABLE PRODUCTS

To facilitate economic life-cycle maintenance by the Government, products supplied for the Contract shall be commercially available products; available through normal Alaska based suppliers or distributers.

2.4 INSTALLATION PRIOR TO APPROVAL

Where the Specifications require product submittals, the installation of products prior to submittal approval by the Contracting Officer shall be sufficient justification for removal of the products as directed by the Contracting Officer.

PART 3 EXECUTION

Not used.

-- End of Section --

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SECTION 01 14 00

WORK RESTRICTIONS
11/21

PART 1 GENERAL

1.1 WORK COVERED

This section lists the minimum constraints and phasing requirements you must incorporate into your schedule and Work activities. Standard constraints and phasing requirements to incorporate into the schedule and Work activities are described below. Additional provisions may be specified in other sections of the Contract.

1.2 REFERENCES

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

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.204-2	Security Requirements
FAR 52.223-3	Hazardous Material Identification and Material Safety Data
FAR 52.236-6	Superintendence by the Contractor
FAR 52.249-10	Default (Fixed-Price Construction)

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

List of Contract Personnel

Vehicle List

Notices To Contracting Officer

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 SPECIAL SCHEDULING REQUIREMENTS

a. Temporary maintenance shop area must be ready for operation as approved by Contracting Officer before Work is started on demolition and construction which would interfere with normal operation.

b. Have materials, equipment, and personnel required to perform the Work at the Site prior to the commencement of the Work.

c. The hangar will remain in operation during the entire construction period. The Contractor must conduct his operations so as to cause the least possible interference with normal operations of the activity.

d. Permission to interrupt any roads, railroads, or utility service must be requested in writing a minimum of 15 calendar days prior to the desired date of interruption.

e. The Work under this Contract requires special attention to the scheduling and conduct of the Work in connection with existing operations. Identify on the construction schedule each factor which constitutes a potential interruption to operations.

The following conditions apply:

(1) Pre-cleaning of maintenance shop equipment, moving tools and equipment, and set up of temporary shop facility on hangar deck.

(2) Interior wall demolition and removal and installation of welded ducting from sanding room to roof top.

1.4.1 Notices to Contracting Officer

Unless otherwise indicated in other sections, notify the Contracting Officer of the actions as listed below. This list is intended to cover the most common requirements for notifications, but all notifications are not limited to these items.

Mobilization: Provide written notice to the Contracting Officer that you intend to mobilize to the Site 14calendar days prior to mobilization. This will allow the U.S. Coast Guard to remove vehicles and assorted equipment from the laydown areas, exterior wall parking spaces, and temporary hangar floor shop area.

Start of Work: The Contractor shall provide the Contracting Officer with a minimum 14 calendar days advance written notice prior to the start of Work at the Project Site. This includes recommencement of Work.

Digging Permit: The Contractor shall be responsible for locating all utilities in accordance with Section 01 11 00 SUMMARY OF WORK and obtain a digging permit before any excavation or digging activities. (No digging is anticipated on this project.). After a digging permit has been obtained, Contractor shall submit a written notification to the Contracting Officer with the approved digging permit attached, at least seven days in advance of the time digging is scheduled to commence in addition, notify the Contracting Officer at least 48 hours prior to starting any excavation Work.

Hot Work Notification: Notify Contracting Officer in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

Utility Outages and Shutdowns: Request utility outages and shutdowns in accordance with Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND

CONTROLS. The Contractor shall be required to coordinate outages at the convenience of the Government. Outages will be approved by the Contracting Officer.

Road Blockage: Request blockage of roads at least 15 days in advance of intended shutdown. The Contractor shall be required to coordinate road closures at the convenience of the Government. Road closures will be approved by the Contracting Officer. See Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS for additional requirements.

Stop Work: Provide formal written notice to the Contracting Officer at least seven days in advance of any planned or intended Work stoppage, shutdowns, demobilization, or delays in the progress schedule from either the Contractor's workforce or any subcontractor.

Subcontractor Arrival: Notify the Contracting Officer at least seven days in advance of the arrival of subcontractor(s) to the Project Site.

Delivery of Materials: Notify the Contracting Officer at least seven days in advance of the arrival of materials to the Project Site that will require expedient inspection and acceptance by the Government prior to their incorporation into the Work.

Inspection and Testing: Unless specified otherwise, notify the Contracting Officer at least seven days in advance of the requirement for inspection of a critical job element and/or performance of formal testing as required herein. Notify the Contracting Officer at least 14 days in advance of structural observations and inspections for structural job elements listed in 01 45 35 SPECIAL INSPECTIONS. Refer to Section 01 45 00 QUALITY CONTROL for the requirements pertaining to inspections and testing. Refer to Section 01 45 35 SPECIAL INSPECTIONS for additional requirements and Special Inspection forms.

Superintendence: In accordance with Section 01 30 00 ADMINISTRATIVE REQUIREMENTS and as required by FAR 52.236-6, the Contractor is required to appoint a superintendent for this Work that will be responsible for the on-site supervision and management of the Contractor's workforce on a daily basis. The superintendent shall be physically present at the Project Site for the duration of Work, and readily accessible by the Contracting Officer. Changes in superintendent will only be accepted by written notification to the Contracting Officer.

Training: Request training of systems 15 calendar days prior to entire Project completion and after all punch list items have been completed. Training shall be conducted after final O&M manuals are received in accordance with Section 01 78 23 OPERATION AND MAINTENANCE MANUALS to be included in the training. All training must be videotaped.

Completion: Provide written notice of completion to the Contracting Officer 30 calendar days prior to completion of the each facility. Completion shall include completion of all testing balancing and commissioning and all interior components of the facility including approved O&M manuals.

1.4.2 Preliminary Work

In order to accomplish the Work with the minimum impact to U.S. Coast Guard operations, preliminary Work as follows must be completed prior to any demolition and/or construction of the new structures and supporting facilities.

a. Submit a Construction Phasing Plan 14 work days prior to the Pre-construction meeting to show understanding of the constraints outlined in this Section.

b. Provide a video survey of the entire Project Site documenting existing conditions prior to the start of any on-site Work, other than design activities. Submit 1 copy to the Contracting Officer.

c. Furnish & Install Construction Trailer and all supporting equipment and utilities, prior to any other Work on-site. Reference Section 01 50 00 Temporary Construction Facilities and Controls for trailer details.

d. Provide written notice to the Contracting Officer of mobilization to each space 14 days prior to the start of mobilization.

1.5 WEATHER

See section 01 11 00 SUMMARY OF WORK for General Working Conditions. The information provided is based on established data and establishes a basic understanding of the typical climatic conditions the Contractor should expect at the Project Site. Verify data provided and coordinate with the Contracting Officer to establish a Project baseline for scheduling purposes.

1.5.1 Unfavorable Weather

Delays caused by unusually severe weather (FAR 52.249-10). Unusually severe weather will be considered unforeseeable and unusually severe if it is more severe than the statistical average for the appropriate weather parameters established by the National Weather Service and as provided in section 01 11 00 SUMMARY OF WORK.

During unfavorable weather, the Contractor shall proceed with only those portions of the Work that may be undertaken safely and without adversely affecting quality. The Contracting Officer shall have the authority for determining which Work will be adversely affected by unfavorable weather.

Should warnings of severe weather be issued, the Contractor shall take every practical precaution to minimize danger to persons, the Work, and to adjacent property. Precautions shall include, but not limited to, closing all openings, removing all loose material, tools and equipment from exposed locations, and removing or securing scaffolding and other temporary Work.

If any part of this Project is pursued during periods of cold or inclement weather, the Contractor shall take all appropriate precautions to protect facilities and Work involved in the Project Scope of Work from damage by cold/or inclement weather. The Contractor shall be responsible for snow removal around Project Site, parking areas, and thoroughfares.

1.6 CONTRACTOR ACCESS AND USE OF PREMISES

1.6.1 Quarters

Government quarters are not available for use under this Contract. Station regulations regarding transient behavior shall be strictly adhered to.

1.6.2 U.S. Coast Guard Installation Regulations

Ensure that Contractor personnel employed for the Work become familiar with and obey U.S. Coast Guard Installation regulations including safety, fire, traffic and security regulations. Keep within the limits of the Work and avenues of ingress and egress. Wear appropriate personal protective equipment (PPE) in designated areas. Do not enter any restricted areas unless required to do so and until cleared for such entry. Mark Contractor equipment for identification.

1.6.2.1 List of Contract Personnel

14 days prior to the commencement of Work, and 14 days prior to the pre-bid Site walk, submit to the Contracting Officer a complete List of Contract Personnel of the Contractor and subcontractors including names, ages, addresses, telephone numbers for use in the event of an emergency, driver's license/identification card numbers, and expected on-site duration.

As changes occur and additional information becomes available, correct and change the information contained in previous lists. For any additional personnel identified throughout the performance of this Project, submit the above information a minimum of 7 days prior to the personnel arriving.

1.6.2.2 Emergency Contacts

Maintain an after-working hours contact point, and provide the Contracting Officer with a telephone number, so that the Government may contact the Contractor at any time in case of emergency.

1.6.2.3 No Smoking Policy

Smoking is prohibited within and outside of all buildings on installation, except in designated smoking areas. This applies to existing buildings, buildings under construction and buildings under renovation. Discarding tobacco materials other than into designated tobacco receptacles is considered littering and is subject to fines. The Contracting Officer will identify designated smoking areas.

1.6.3 Working Hours

Regular working hours must consist of an 8 hour period established by the Contracting Officer, between 7 a.m. and 6 p.m., Monday through Friday, and 7 a.m. to 3:00 p.m. on Saturday , excluding Government holidays.

No Work requiring Government coordination (including but not limited to moving vehicles, aircraft, or other equipment) or inspection Work is allowed on weekends or Federal holidays.

1.6.4 Work Outside Regular Hours

Work outside regular working hours including Work to support outages,

requires Contracting Officer approval. Make application 15 calendar days prior to such Work to allow arrangements to be made by the Government for inspecting the Work in progress, giving the specific dates, hours, location, type of Work to be performed, Contract Number and Project Site. Based on the justification provided, the Contracting Officer may approve Work outside regular hours. During periods of darkness, the different parts of the Work must be lighted in a manner approved by the Contracting Officer.

If the Contractor desires to consistently work outside of regular hours, a formal written request shall be made to the Contracting Officer 14 days in advance. Requests to work outside regular working hours may be granted at the convenience of the Government.

1.6.5 Occupied and Existing Facilities

The Contractor will be working in an existing building which is occupied. Do not enter the building without prior approval of the Contracting Officer.

Occupancy notifications shall be posted in a prominent location in the Work Area.

Before Work is started, arrange with the Contracting Officer a sequence of procedures, means of access, space for storage of materials and equipment, and use of approaches, corridors, and stairways.

The existing buildings and their contents must be kept secure at all times. Provide temporary closures as required to maintain security as directed by the Contracting Officer.

Provide dust covers or protective enclosures to protect existing Work that remains and Government material located in the Work area during the construction period.

Relocate movable furniture as required to perform the Work, protect the furniture, and replace the furniture in its original location upon completion of the Work. Leave attached equipment in place, and protect it against damage, or temporarily disconnect, relocate, protect, and reinstall it at the completion of the Work.

The Government will remove other Government property in the areas of the building scheduled to receive Work.

The Contractor shall expect that aircraft will be located in each hangar bay during the Project. Construction or equipment access may require aircraft to be evacuated from the hangar. Coordinate schedule of Work requiring evacuation of the hangar of aircraft with the Contracting Officer. Due to weather, there may be times at which no aircraft can leave the hangar. The Contractor shall request Contracting Officer approval a minimum of 72 hours prior to Work requiring aircraft to be moved. The Contractor shall expect that aircraft will not be removed from the hangar before 0830 and will return at 1800.

The Contractor shall be working adjacent to and within an operational aircraft hangar and apron. Provide FOD countermeasures on all aspects of your Work. Plan deliveries of materials to minimize impact to operations. Provide traffic plans and Work impact plans.

Provide sufficient lighting at the Site during all seasons and weather conditions.

1.6.6 Utility Cutovers and Interruptions

a. Make utility cutovers and interruptions after normal working hours or on Saturdays, Sundays, and Government holidays. Conform to procedures required in paragraph WORK OUTSIDE REGULAR HOURS.

b. Ensure that new utility lines are complete, except for the connection, before interrupting existing service.

c. Interruption to water, sanitary sewer, storm sewer, telephone service, electric service, air conditioning, heating, fire alarm, compressed air, and propane are considered utility cutovers pursuant to the paragraph WORK OUTSIDE REGULAR HOURS. Phase your Work so that utility interruptions to the hangar and/or other Base facilities do not exceed 1 hour. Utility cutovers and outage periods must be carefully coordinated with the COR/CI and the AIRSTA SITKA Facility Engineer and Aviation Engineering Officer to prevent adverse impact to Search and Rescue (SAR) operations.

d. Operation of Station Utilities: The Contractor must not operate nor disturb the setting of control devices in the station utilities system, including water, sewer, electrical, compressed air and heating services. The Government will operate the control devices as required for normal conduct of the Work. The Contractor must notify the Contracting Officer 72 hours in advance when such operation is required.

1.6.7 Hazardous Areas Work Clearance Request

1.6.7.1 Hazardous Areas

Do not enter into Work areas where personnel are using PPE such as respirator and masks or marked boundary areas without prior approval.

1.7 SECURITY REQUIREMENTS

Contract Clause FAR 52.204-2 Security Requirements and Alternate II and the following apply:

Contractor personnel are not allowed on the hangar deck or other areas of the hangar without a designated USCG representative present. Contractor personnel may not stray from the immediate area of the Work.

Coordinate with the COR/CI for Base access for personnel, equipment and vehicles.

1.7.1 Personnel List

Contractor's superintendent shall keep a daily sign in log for all staff and all subcontractors and visitors on this Contract. The list shall match the List of Contract Personnel and may be reviewed periodically by the Contracting Officer, people not on the list shall be removed from the Site.

1.7.2 Base Access

AIRSTA SITKA is a Federal facility. All personnel visiting the Site will be required to present Real ID Act compliant valid picture identification. (Note: Not all state issued drivers licenses are Real ID Act compliant. Inform your employees and subcontractors and delivery personnel as needed to avoid being denied entry). All personnel working on the Project Site must be legal to work in the United States of America. Confirm Base Security office hours with local Base.

All personnel shall carry proper ID when on-site. Proper ID is defined as either the individual's driver's license, or state federal picture ID or Passport compliant with Real ID Act. The identification must be laminated, and show a facial picture of the individual. Individuals without proper ID will be escorted off the U.S. Coast Guard premises.

1.7.3 Vehicle List

Contact the Contracting Officer regarding regulations concerning vehicle passes. Furnish a complete list of over-the-road vehicles and construction equipment to the Contracting Officer. The list shall include the make, model, year built, and identifying marks.

All vehicles entering the Site must present and carry proof of insurance at all times.

1.8 SHIPMENT AND STORAGE OF MATERIALS AND EQUIPMENT

1.8.1 Shipment of Materials and Equipment

The Contractor is responsible for the transportation and receipt of all of materials, equipment and tools required for the completion of the Work of this Contract.

All shipment of materials, equipment and/or supplies by the Contractor to the Project Site shall be addressed to the Contractor, not to the Government. The Contractor must be on hand to accept shipments; the Government will not accept shipments.

Deliver products and materials in manufacturer's original unopened packages or containers bearing manufacturer's labels.

All loads shall be covered and secured in accordance with State of Alaska regulations. Any trucks found in violation of this requirement may be banned from accessing the Base, Installation, and/or Project Site.

All materials and equipment subject to damage during transportation, including but not limited to discoloring or deterioration from the elements, shall be shipped in weather tight enclosures. Provide ventilation to avoid condensation. Maintain temperature and humidity within the ranges stated in the manufacturer's printed instructions.

Hazardous material shipment and identification requirements shall be in accordance with Sections 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS, 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, and 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT and as stated in FAR 52.223-3.

1.8.2 Storage of Materials and Equipment

Provide storage area(s) in accordance with Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS.

Products delivered to the Project Site shall be the same as those indicated in approved submittals, do not store products on the Project Site that are not to be incorporated into the Work. Take care to prevent damage to approved products and provide storage in accordance with standard manufacturer's recommendations and as stipulated in the technical Specification sections.

There should be no expectation of security for the Contractor's materials. The Contractor shall be fully responsible for the security of all stored material and equipment, and shall erect temporary barriers to demark their Work/storage areas or other security measures they deem necessary, at their expense and in accordance with Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS. The Contractor shall be responsible for providing additional covered storage for materials, at their expense. Any fencing installed in existing paved areas shall be surface mounted and weighed down for FOD countermeasures.

Provide FOD countermeasures on all aspects of your Work. Good control of all material shall be implemented and nothing that wind or rain can displace shall be left on-site. Materials left on-site shall be secured, covered or tied down, to implement FOD control.

Store materials and equipment subject to damage, discoloring, and/or deterioration from the elements in weather tight enclosures. Provide ventilation to avoid condensation. Maintain temperature and humidity within the ranges stated in the manufacturer's printed instructions.

Store fabricated products off the ground on platforms, blocking, or skids.

Store loose granulated material on solid surfaces such as paving, plywood, or sheet material to prevent mixing with foreign matter. Provide drainage to prevent ponding of rainwater. Prevent mixing of materials.

Runoff from stored metal materials is prohibited. All metal materials (iron, sheet metal, building components), shall be tarped when not actively loading/unloading, to prevent rain/runoff of metals to Base Kodiak's Installation's stormwater collection systems.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

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SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES
11/21

PART 1 GENERAL

1.1 WORK COVERED

This section includes the general requirements of the Contractor pertaining to preparation of Schedule of Prices and the submission of payment requests.

1.2 REFERENCES

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

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 32.503-6	Suspension or Reduction of Payments
FAR 52.232-5	Payments Under Fixed-Price Construction Contracts
FAR 52.232-27	Prompt Payment for Construction Contracts

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Schedule of Prices

This section covers the submittal requirements for progress payments. All items must be cost loaded and included on the Project Schedule to be a billable item. Line items must be 100% complete to be billed.

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 SCHEDULE OF PRICES

1.4.1 Data Required

Provide a detailed breakdown of the Contract price, giving quantities for each of the various kinds of Work, unit prices, and extended prices. Costs shall be summarized and totals provided for each construction category. Within 15 calendar days of notice of award, prepare and deliver to the Contracting Officer a Schedule of Prices(Construction Contract) as directed by the Contracting Officer. Schedule of Prices must have cost

summarized and totals provided for each construction category.

1.4.2 Schedule Instructions

Payments will not be made until the Schedule of Prices has been submitted to and accepted by the Contracting Officer. Schedule of Prices must identify the cost for Site Work, and include incidental Work to the 5 ft line. Identify costs for the building(s), and include Work out to the 5 ft line. Work out to the 5 ft line shall include construction encompassed within a theoretical line 5 ft from the face of exterior walls and shall include attendant construction, such as pad mounted HVAC cooling equipment, cooling towers, and transformers placed beyond the 5 ft line.

1.4.3 Format

Only computer generated schedules are acceptable. Contractors may submit cost proposals utilizing their own format unless a specific format is requested by the Contracting Officer.

Unless otherwise directed by the Contracting Officer, itemize every cost proposal submitted under this Contract as outlined in this paragraph. Costs of material, labor, equipment, subcontracts, overhead, and profit must be separately itemized for each distinct category of Work. The number of line items listed shall be left to the discretion of the Contractor, except that at least one item shall be listed for each Work activity listed in the Project Schedule.

Include necessary supporting documentation, invoices, etc. as attachments. For proposals involving time extensions due to Government-caused delays, include an analysis of the impact of the delay and an adjusted progress schedule.

The prices used in the Schedule of Prices shall be "loaded prices" including any applicable overhead, profit, labor burden, bonding, insurance, etc. The sum of all prices listed on the schedule shall match exactly the total Contract price to date.

1.4.3.1 Modifications

Contract modifications added to the Contract after approval of the original Schedule of Prices shall be included as separate line items on the bottom of the approved Schedule of Prices and incorporated in the next payment request. Resubmission of the Schedule of Prices due to Contract modification will not be required.

1.4.3.2 Prohibitions

The cost associated with individual line items shall accurately relate to the Work activity to which it is related. Front loading of the schedule in order to receive a disproportionate payment for Work early in the Contract shall result in disapproval of the Schedule of Prices.

1.5 CONTRACT MODIFICATIONS

Cost Proposals for Modifications: Itemize every cost proposal submitted

as outlined in this paragraph. Costs allocable to material, labor, equipment, subcontractors, overhead, bonding, insurance and profit must be separately itemized for each distinct category or item of Work encompassed. Include documentation such as invoices, quotes, vendor estimates, or other supporting cost figures. Clearly state in the proposal if an extension in the performance period is required. For proposals involving time extensions, include rationale for the extension and a proposed adjusted Project Schedule.

Each executed Contract modification shall be added to the end of the approved Schedule of Prices.

1.6 CONTRACTOR'S INVOICE AND CONTRACT PERFORMANCE STATEMENT

1.6.1 Content of Invoice

Requests for payment will be processed in accordance with the Contract Clause FAR 52.232-27 Prompt Payment for Construction Contracts and FAR 52.232-5 Payments Under Fixed-Price Construction Contracts. Each request for payment shall include the documents listed below.

a. Request for Payment Form; this Contracting Officer will provide this form upon award . The Contracting Officer may approve alternate forms provided that they include the necessary information in a consistent format. The form shall summarize the basis for arriving at the amount of the invoice. Request for Payment forms shall include certification by Contractor and Quality Control (QC) Manager.

b. An up-to-date Schedule of Prices, showing in detail: the estimated cost, percentage of completion, and value of completed performance for each of the construction categories stated in this Contract.

c. Updated Project Schedule

d. Reports required by the Contract.

e. Updated copy of submittal register.

f. Other supporting documents as requested.

Invoices not completed in accordance with Contract requirements will be returned to the Contractor for correction of the deficiencies.

1.6.2 Submission of Invoices

A submittal form cover page is not required for payment requests. The request shall be signed and dated by a person duly authorized by the Contractor.

During the construction phase: Organize your pay request in accordance with all requirements of this Specification section. Review the pay request and any supporting backup with the Contracting Officer's Representative (COR). The COR shall initial the line items as being in-place. Upon COR's approval, submit in accordance with the procedure outlined in the Task Order.

1.6.2.1 Frequency

In accordance with Section 01 32 16 PROJECT SCHEDULES, submit updated

progress documentation along with the request for payment.

Progress payment requests may only be submitted once a month to coincide with the Monthly schedule update.

1.6.2.2 Mailing

One (1) hard copy of all payment requests shall be sent by first class mail or courier directly to the Contracting Officer to one of the following addresses:

USPS Mailing Address
ATTN: Intended Recipient
(to be assigned by KO)
CG Civil Engineering Unit Juneau
P.O. BOX 25517
Juneau, AK 99802-5517

FedEx or UPS Shipping Address:
ATTN: Intended Recipient
(to be assigned by KO)
CG Civil Engineering Unit Juneau
709 West 9th Street, Room 817
Juneau, Alaska 99801

1.6.3 Monthly Pay Requests

The Contractor's pay request consists of the approved Schedule of Values, the Project Schedule Baseline, and the data columns below.

a. Activity number from the accepted Project Schedule Baseline (or DPS)

b. Activity name from the accepted Project Schedule Baseline (or DPS)

c. RPUID Number associated with the activity (construction items only)

d. Schedule of Prices: These will be the Activity values approved by the Contracting Officer.

e. Activity Percent Complete to Date: Insert the percent complete value for this activity. (Note progress will be tracked but payment will be upon 100% completion only).

f. Previously billed Activities: The value in this field is carried over from the previous months approved invoice amounts.

g. Amount requested this invoice. This shall be only items that are 100% complete at submission of the pay request.

h. Remaining Activities Amount: This value shall be the remaining Work left to complete the Contract. (Schedule of Values, minus this billing and all prior billings.)

1.6.4 Final Invoice

a. A final invoice shall be accompanied by the Contractor's Final Release, DHS Form 700-3 . The Contracting Officer will provide a current version of this form upon task completion. If the Contractor is incorporated, the Final Release shall contain the corporate seal. An officer of the corporation shall sign and the corporate secretary shall certify the Final Release.

b. Final invoices not accompanied by the Contractor's Final Release will

be considered incomplete and will be returned to the Contractor.

1.7 PAYMENTS TO THE CONTRACTOR

Payments will be made on submission of itemized requests by the Contractor which comply with the requirements of this section, and will be subject to reduction for overpayments or increase for underpayments made on previous payments to the Contractor.

Payment on Work will be approved only on the percentage of Work completed as of the date of the payment request. Percentages of Work complete for each line item shall be obtained by mutual agreement between the Contracting Officer and Contractor prior to submission of the payment request to the Contracting Officer.

1.7.1 Obligation of Government Payments

The Government shall have 14 working days to process each progress payment request based on the date the hard copy of the payment request is received and logged in by the Contracting Officer. Each request for payment will be stamped with the date received. Electronic submission of payment requests may be used in lieu of mailed submissions if specifically authorized by the Contracting Officer. All payment requests will be retained by the Government. Final payments have a 30 calendar day due date.

Retainage is defined as withholding a fixed percentage of payment from each Contractor payment request, as a matter of standard practice. The Government will not perform retainage on payments for this Work if the Contractor performance is satisfactory. However, the Government shall retain the right to commence retainage at any point if the Contractor exhibits unsatisfactory performance or does not proceed with due diligence in keeping with the approved Project Schedule. If retainage is commenced, the Contractor shall be informed by the Contracting Officer. Retainage will normally be limited to a maximum of 10%.

The obligation of the Government to make payments required under the provisions of this Contract will, at the discretion of the Contracting Officer, be subject to reductions and suspensions permitted under the FAR and agency regulations including the following in accordance with FAR 32.503-6 Suspension or Reduction of Payments:

a. Reasonable deductions due to defects in material or workmanship;

b. Claims which the Government may have against the Contractor under or in connection with this Contract;

c. Unless otherwise adjusted, repayment to the Government upon demand for overpayments made to the Contractor; and

d. Failure to provide up to date Record Drawings not current as stated in Contract Clause "FAR 5252.236-9310, Record Drawings."

1.7.2 Approval

The Contracting Officer is the only approving authority for payment requests.

1.7.3 Payment for On-site and Off-site Materials

Materials are considered a sub-activity of a complete activity. Activities may be divided into installation activities and materials activities. In order for material requests for payment to be considered, the material shall be per the approved submittal, on-site, inspected, and approved by the Contracting Officer or properly stored or protected, and proof of paid invoices provided. The amount requested cannot exceed the material amount identified on the approved schedule of values. If the paid invoice is less than the amount on the approved schedule of values, the remainder shall be applied to the installation phase and be billable once the activity is complete and tested.

Paid material invoices shall be legible and clearly document the type, quantity and cost of the materials covered by the invoice. The Contractor shall clearly mark on each invoice the activity number for which payment is being requested. For invoices covering more than one activity, the Contractor shall indicate both the activity number and the percentage of the total invoice to be applied. Incomplete or unreadable invoices will not be considered when processing payment requests.

If the Contractor orders products prior to receiving approval on required submittals, the Contractor shall be solely responsible if the submitted product is subsequently disapproved.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS
11/21

PART 1 GENERAL

1.1 REFERENCES

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

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 28.307-2	Liability
FAR 52.249-10	Default (Fixed-Price Construction)

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

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1926	Safety and Health Regulations for Construction

1.2 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-06 Test Reports

Daily Reports

Meeting Minutes

Weekly Progress Meeting Agenda

SD-07 Certificates

Weekly Payroll Reports

1.2.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.3 MINIMUM INSURANCE REQUIREMENTS

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

1.4 SUPERVISION

1.4.1 Minimum Requirements

Have at least one qualified superintendent, or Contracting Officer approved alternate, on the Project Site at all times during the performance of Contract Work. In addition, if a Quality Control (QC) representative is required on the Contract, then that individual must meet the requirements of Section 01 45 00 QUALITY CONTROL.

1.4.2 Superintendent Qualifications

The Project superintendent must have a minimum of 10 years experience in construction with at least 5 of those years as a superintendent on Projects similar in size and complexity. The individual must be familiar with the requirements of 29 CFR 1910 and 29 CFR 1926 and have experience in the areas of hazard identification and safety compliance. The individual must be capable of interpreting a critical path schedule and Construction Drawings. The qualification requirements for the alternate superintendent are the same as for the Project superintendent. The Contracting Officer may request proof of the superintendent's qualifications at any point in the Project if the performance of the superintendent is in question.

Unless approved otherwise by the Contracting Officer, the Project superintendent may not be assigned to any other projects or efforts besides the Project and Work included under this Contract.

For routine Projects where the superintendent is permitted to also serve as the Quality Control (QC) Manager as established in Section 01 45 00 QUALITY CONTROL, the superintendent must have qualifications in accordance with that section.

1.4.2.1 Duties

The Project superintendent is primarily responsible for managing and coordinating day-to-day production and schedule adherence on the Project. The superintendent is required to attend Red Zone meetings, partnering meetings, and quality control meetings. The superintendent or qualified alternative must be on-site at all times during the performance of this Contract until the Work is completed and accepted.

1.4.3 Non-Compliance Actions

The Project Superintendent is subject to removal by the Contracting Officer for non-compliance with requirements specified in the Contract and for failure to manage the Project to insure timely completion. Furthermore, the Contracting Officer may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders is acceptable as the subject of claim for extension of time for excess costs or damages by the Contractor.

1.5 REPORTS

1.5.1 Daily Reports:

The Contractor shall submit daily reports to the Contracting Officer using the either a standard form provided by the Contractor that meets all of

the criteria listed below or a Standard Daily Report formwhich will be provided by the Government upon request.

Daily reports shall be submitted to the Contracting Officer by 9:00 am on the next work day. If Work is not completed on a regular work day due to weather or other constraints, submit a report indicating the reasons.

Submit daily reports electronically as pdf files. Reports should utilize a standard format/template throughout the Project duration. The daily report files shall be named as follows: YYYYMMDD "Project" Daily Report. Where YYYYMMDD is the date and "Project" is the abbreviated Project name. Whenever possible, the report and all attachments should be included in a single document.

In general, daily reports should include the following information:

a. Project title and Contract number.

b. Weather, including inches of rainfall and maximum/minimum temperatures (should be more detailed for outdoor Projects.

c. List of Contractor and subcontractor employees, their job categories, and the number of hours worked on the Project.

d. List of heavy equipment, and the number of hours working. The detailed description of Work performed (see below) should indicate what the equipment was used for.

e. A description of the Work performed and the Base impact areas.

f. List of materials delivered.

g. List of official visitors.

h. List of specific QC inspections and testing performed, including results and corrective actions. If inspection/test results are not yet available, describe what was done and submit results as soon as they become available. The Contractor shall use a tracking system to assure that all such inspection reports are submitted. Resubmittals that provide such additional information should consist of the entire Daily Report, not just the new sheets.

i. List of verbal instructions received from the Government.

j. Certification of the report by the Contractor's Quality Control Representative.

k. Other information to accurately and thoroughly document the Work. This may include photographs.

1.5.2 Weekly Payroll Reports

Weekly Payroll Reports required by Labor Standards Provisions shall be submitted to the Contracting Officer.

1.6 MEETINGS

All meetings shall include the following attendees:

Contractor's Project Manager, Contractor's Superintendent, QC Manager, Safety Officer, Environmental Manager, and additional personnel as determined by the Contractor or as directed by the Contracting Officer.

1.6.1 Meeting Minutes

The Contractor shall make a record of all meeting minutes. Distribute the minutes to all participants within 1 working day of the meeting.

1.6.2 Post-Award Conference:

The Post-Award Conference will be scheduled by the Contracting Officer and will occur within 14 days of Contract award.The Post-Award Conference will be conducted via teleconference and will is intended primarily to address questions regarding administrative items, preconstruction submittals, and general project questions.

1.6.3 Preconstruction ConferencePrior to commencing any Work at the Site, the Contractor shall attend a Preconstruction Conference with the Government regarding this work. The Contractor shall attend the Preconstruction Conference at the Project location. The Contractor shall be responsible for all expenses incurred to attend this conference. Major subcontractors who will engage in the Work must also attend.The Pre-construction Conference will be scheduled after the Contracting Officer has received satisfactory submittals as listed below and as required under other sections of this Specification. Except as otherwise specified, the Contractor shall deliver these submittals to the Contracting Officer a minimum of 14 days prior to the scheduled Pre-construction Conference.

a. List of Contract Personnel (See Section 01 14 00

b. Vehicle List (See Section 01 14 00

c. Schedule of Prices (See Section 01 20 00)

d. Baseline Project Schedule (See Section 01 32 16)

e. Submittal Register ((See Section 01 33 00

f. Accident Prevention Plan (See Section 01 35 26)

g. Quality Control Plan (See Section 01 45 00)

h. Environmental Protection Plan (See Section 01 57 19)

i. Regulatory Notifications (See Section 01 57 19)

Upon approval of the required Preconstruction Submittals, coordinate with the Contracting Officer to determine the time and location of the Preconstruction Conference.

On-site Work and any request for progress payments depend on successful completion of the Preconstruction requirements and the approval of Preconstruction Submittals by the Government.

1.6.3.1 Meeting Content:

Contract requirements, administrative procedures, and general requirements of the Work to be performed will be discussed.

The meeting should also help develop a mutual understanding between the Contractor and the Government relative to the administration of the safety program, preparation of the schedule of prices or earned value report, Shop Drawings, and other submittals, scheduling programming, and prosecution of the Work.

The Contractor shall present any technical questions, recommendations, value engineering proposals, requests for variance from the Project requirements, or any condition which may constitute a changed Site conditions after start of Work.

In addition, the Preconstruction Meeting Discussion shall cover the following:

a. Proposed Project Schedule (See Section 01 32 16 PROJECT SCHEDULES)

b. List of Technical Submittals (See Section 01 33 00 SUBMITTAL PROCEDURES)

c. Contract Administration Issues (See Section 01 30 00 ADMINISTRATIVE REQUIREMENTS)

d. Request For Information process

e. Any request for variance from original Contract

Commencement of on-site Work depends on successful completion of the preconstruction requirements and the approval of preconstruction submittals by the Government.

1.6.3.2 Notice to Proceed (NTP):

Commencement of construction will only be allowed after approval of the submittals listed above and completion of the Pre-construction Conference. Unless otherwise specified, the intent is to begin construction within a maximum of 120 calendar days after the award of the Contract/task order, providing the Contractor has complied with all requirements to date.

Failure of the Contractor to comply with the requirements of this section shall be grounds for determination by the Contracting Officer that the Contractor is not prosecuting the Work with such diligence as will ensure completion within the time specified. Upon such determination the Contracting Officer may terminate the Contractor's right to proceed with the Work, or any separable part thereof, in accordance with FAR 52.249-10 Default (Fixed-Price Construction).

1.6.4 Weekly Progress Meetings:

Coordinate with the Contracting Officer to conduct weekly progress meetings. Weekly Progress Meetings shall commence during the week following the Post-Award Conference. Progress meetings during the

pre-construction time period shall be held by teleconference and will focus primarily on submittal status. The preferred location for progress meetings during the construction period is on-site. If on-site meetings are not practical, the meeting may be held by teleconference. Submit a Weekly Progress Meeting Agenda 1 day prior to the meeting. The progress metting agenda shall include at least the following items:

1. Project Schedule update

2. Safety, Compliance, or Quality Control Issues

3. Status of Submittals/Submittal Register

4. Outstanding RFIs

5. Pending modifications

6. Requests for Payment

1.6.5 Pre-installation Meetings:

Prior to commencing any Key Element of the Work, organize and conduct a pre-installation meeting with the Contracting Officer. Schedule meeting 7 days prior to the subcontractors intended start of Work. The subcontractor must bring approved copies of all submittals/material catalog cuts, pertaining to his/her Work to this meeting.

The following are considered Key Elements of the Work:

a. Pre-cleaning of maintenance shop areas.

b. Set up of temporary shop facility on hangar deck.

c. Demolition of existing exhaust ducting from sanding room to roof.

d. Installation of new welded ducting from sanding room to roof.

e. Removal of temporary shop facility and reinstallation of equipment in reconfigured maintenance shop.

1.6.5.1 Meeting Content:

Topics to be discussed include the following:

Review of pertinent approved material and manufacturers recommended installation procedures (any deviation from manufacturers recommendations must be approved by the DE)

Review of Work Plans

Verify no outstanding RFI's effect this Work element

Status of insurance certificates

List of employees

1.6.5.2 Attendance:

Required Attendance: Attendance at the Pre-Installation Meetings shall include the following additional attendees:

Contractor and Subcontractor foremen involved with the Key Element of the Work.

Other personnel as specified in individual technical Specification sections

1.6.6 On-Site Safety Meetings:

Comply with Section 01 35 26 for On-Site Safety Meetings.

1.6.7 Labor Interviews:

The Government may conduct periodic Labor Standard interviews to insure the on-site workers are being paid the Davis Bacon wage rates, and that the applicable wage rates are properly posted and accessible to the on-site workforce. Ensure that access to employees and on-site trade personnel is provided upon request.

1.7 FACILITY TURNOVER PLANNING MEETINGS (U.S. Coast Guard District 17 Red Zone - CGRZ)

Meet with the Government to identify strategies to ensure the project is carried to expeditious closure and turnover to the Client. Start the turnover process at the Pre-Construction Conference meeting with a discussion of the U.S. Coast Guard District 17 Red Zone (CGRZ) process and convene at regularly scheduled CGRZ Meetings. Include the following in the facility Turnover effort:

1.7.1 CGRZ Checklist

a. Contracting Officer (COR) will provide the Contractor a copy of the CGRZ Checklist template prior to 75 percent completion.

b. Prior to 75 percent completion add/delete critical activities to the CGRZ Checklist template as necessary to match the project scope, and schedule critical activities and insert planned completion dates in the CGRZ checklist for each critical activity. Present the CGRZ Checklist to COR and review during a regularly scheduled QC Meeting.

1.7.2 Meetings

a. Upon Government acceptance of the CGRZ Checklist, the Project Superintendent is required to lead regular CGRZ Meetings beginning at approximately 75 percent project completion, or three to six months prior to Beneficial Occupancy Date (BOD), whichever comes first.

b. The Contracting Officer will determine the frequency of the meetings, which is expected to increase as the project completion draws nearer.

c. Using the CGRZ Checklist as a Plan of Action and Milestones (POAM) and

basis for discussion, review upcoming critical activities and strategies to ensure work is completed on time.

d. Coordinate with the COR any upcoming activities that require Government involvement.

e. Maintain the CGRZ Checklist by documenting the actual completion dates as work is completed and update the CGRZ Checklist with revised planned completion dates as necessary to match progress. Distribute copies of the current CGRZ Checklist to attendees at each CGRZ Meeting.

1.8 PARTNERING

To most effectively accomplish this Contract, the Government requires the formation of a cohesive partnership within the Project Team whose members are from the Government, the Contractor and their subcontractors. Key personnel from the Supported Command, the Facility Partner (who will occupy the facility), the Government Design and Construction team and Subject Matter Experts, the Installation, the Contractor and their subcontractors, and the Designer of Record will be invited to participate in the Partnering process. The Partnership will draw on the strength of each organization in an effort to achieve a Project that is without any safety mishaps, conforms to the Contract, and stays within budget and on schedule.

The Contracting Officer will provide Information on the Partnering Process and a list of key and optional personnel who should attend the Partnering meeting.

1.9 ELECTRONIC MAIL (E-MAIL) ADDRESS

Establish and maintain electronic mail (e-mail) capability along with the capability to open various electronic attachments as text files, pdf files, and other similar formats. Within 7 days after Contract award, provide the Contracting Officer a single (only one) e-mail address for electronic communications from the Contracting Officer related to this Contract including, but not limited to Contract documents, invoice information, request for proposals, and other correspondence. The Contracting Officer may also use email to notify the Contractor of base access conditions when emergency conditions warrant, such as hurricanes or terrorist threats. Multiple email addresses are not allowed.

It is the Contractor's responsibility to make timely distribution of all Contracting Officer initiated e-mail with its own organization including field office(s). Promptly notify the Contracting Officer, in writing, of any changes to this email address.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 32 16

PROJECT SCHEDULES
11/21

PART 1 GENERAL

1.1 WORK COVERED

This section includes the general requirements of the Contractor pertaining to preparation of Project and Progress Schedules.

Provide, administer, and maintain a computerized Project Schedule as a tool for planning and executing the Work.. The Project Schedule will assist the Contracting Officer with evaluating the sequence and progress of the Work, making progress payments, and making decisions relative to time and/or cost adjustments which may result from modifications to the Work.

It is expressly understood and agreed that the time of beginning, the rate of progress, and the time of completion of the Work are of the essence of this Contract. Execute the Work as required to prevent any delay to the Contract milestone dates or the general completion of the Contract.

1.2 REFERENCES

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

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-15 Schedules for Construction Contracts

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Baseline Project Schedule

SD-07 Certificates

Monthly Updates

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 BASELINE PROJECT SCHEDULE

Within 30 calendar days after contract award and prior to the start of

work,prepare and submit a Baseline Project Schedule in the form of a Bar Chart Schedule Bar Chart Schedule in accordance with the terms in Contract Clause FAR 52.236-15 Schedules for Construction Contracts, except as modified in this Contract. The approval of a Baseline Project Schedule is a condition precedent to:

a. The Contractor starting demolition Work or construction stage(s) of the Contract.

b. Processing Contractor's invoice(s) for construction activities/items of Work.

c. Review of any Schedule updates.

See Sections 01 11 00 SUMMARY OF WORK, 01 14 00 WORK RESTRICTIONS, 01 30 00 ADMINISTRATIVE REQUIREMENTS, and 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS for start date assumptions and detailed minimum phasing and sequencing requirements, mandatory interim milestones, and additional temporary facilities. See paragraph 1.8 and Section 01 33 00 SUBMITTAL PROCEDURES for submittal, review and approval of the Project Schedule.

The Baseline Project Schedule consists of diagrams and reports covering the entire Contract from Contract Award to Final Acceptance. Specific deliverables are listed below.

a. Detailed precedence diagram/Bar Chart

(1) Provide an electronic copy to the Contracting Officer with a title block and a calendar day timeline on each page. Upon request, print the detailed bar charts in color, on 11x17 sheets minimum.

(2) Time scale the chart to show a continuous flow of information from left to right.

(3) Show the critical path in red clearly and graphically on the chart with solid bars.

(4) Organize the bar chart by Work Area groupings.

(5) Show fixed Contract dates (Contract completion date and current or data date) as bold vertical lines on the printout.

b. Schedule of Cost Loading/Schedule of Prices

c. Written Confirmation of subcontractors and Suppliers

(1) Provide the Contracting Officer with written confirmation of the concurrence of all major trade subcontractors and suppliers with the Baseline Project Schedule.

(2) For purposes of this Article, the term "major subcontractors and suppliers" includes any subcontractor or supplier with 20 percent or more of the value of the Contract.

Submittal of the Baseline Project Schedule, and subsequent Schedule updates, is understood to be the Contractor's certification that the submitted Schedule meets the requirements of the Contract Documents,

represents the Contractor's plan on how the Work will be accomplished, and accurately reflects the Work that has been accomplished and how it was sequenced (as-built logic).

By execution of the Contract, the Contractor acknowledges that the following have been analyzed.

a. The Scope of the Work, including interim milestones, time and effort to acquire required permits from jurisdictional authorities as required to comply with the Scope of Work of this Contract.

b. The materials and methods of construction required.

c. The availability of skilled and unskilled labor.

d. Restrictions of the Site.

e. Constraints imposed by the Contract

f. Your own Work load and capacity to perform the Work, and that you agree the specified times are reasonable considering the existing conditions prevailing in the locality of the Work, including weather conditions and other factors, with a reasonable allowance for variations from average.

1.5 SCHEDULE FORMAT

1.5.1 General Schedule Requirements

The following paragraphs contain general scheduling requirements applicable to all components of the Project Schedule submissions.

a. The overall Project Schedule is made up of several related components and submissions. Unless otherwise indicated, the term "Project Schedule" refers to all components of the Schedule, as follows.

(1) Baseline Project Schedule

(2) 3-Week Look Ahead Planning Schedule

(3) Monthly Updates: These components each have several specific deliverables (e.g., reports or diagrams) that are explained in detail in this Section.

b. **Only computer generated Schedules are acceptable.** Project Schedules shall be in the form of a Gant bar chart or other similar bar chart conforming to the critical-path-method for Project Management Planning. The Project Schedule shall list each Work activity along the left vertical side of the page, with a timeline along the top horizontal side of the page.

c. The Project Schedule must show the sequence and interdependence of activities required for complete performance of the Work, beginning with the Contract Award and concluding with the date of Final Acceptance of the Contract. Show all activities in work days, with allowance for the effects of normal weather conditions on outside Work

d. The following information shall be easily determined for each Work activity listed: start date, finish date, duration in days, crew

size, and if the activity falls along the critical path. Indicate the date of mobilization to and demobilization from the Project Site on the Schedule. The number of Work activities listed shall be left to the discretion of the Contractor, except that at least one activity shall be listed for each technical Specification division included herein.

e. Activity time durations shall be in units of Project Work Days. They shall be based on the optimum labor, equipment, and materials required to perform each activity on a normal work day basis.

f. No on-site activity may have duration over ten working days, except non-construction activities, such as submittal reviews, procurement, and delivery of materials or equipment, and concrete curing. The duration of each listed non-construction activity shall be limited to not more than 14 calendar days, otherwise the activity shall be broken down into a series of shorter activities.

g. The Project Schedule must comply with all limits imposed by the Scope of Work, with all contractually specified intermediate milestone and completion dates, and with all constraints, restraints, or sequences included in the Contract.

1.5.2 Bar Chart Schedule

The Bar Chart must, as a minimum, show Work activities, submittals, Government review periods, material/equipment delivery, utility outages, on-site construction, inspection, testing, and closeout activities. The Bar Chart must be time scaled and generated using an electronic spreadsheet program.

1.5.3 Schedule Submittals and Procedures

Submit Schedules and updates in hard copy and on electronic media that is acceptable to the Contracting Officer. Provide an electronic copy to the Contracting Officer with a title block and a calendar day timeline on each page. Upon request, print the detailed schedules in color, on 11x17 sheets minimum.

1.6 SCHEDULE MONTHLY UPDATES

Section 01 20 00 PRICE AND PAYMENT PROCEDURES describes the requirements for making the Request for Progress Payment. In addition, the Contract requires that the Schedule be maintained as an as-built document. Update the Project Schedule at monthly intervals or when the Schedule has been revised. Record actual dates for all activities and adjust the network as necessary to reflect actual execution of the Work. PAYMENT REQUESTS WILL NOT BE PROCESSED UNTIL SUCH UPDATES HAVE BEEN MADE.

Keep the updated Schedule current, reflecting actual activity progress and plan for completing the remaining Work. The update is to be made from the Baseline Project Schedule. It includes the earned value report in accordance with this Section and Section 01 20 00 PRICE AND PAYMENT PROCEDURES and the Project Summary Narrative report. Include copies of purchase orders and confirmation of delivery dates as directed by the Contracting Officer. Print the detailed bar charts in color, on 11x17 sheets minimum, with a title block and a calendar day timeline on each page. Time scale the chart to show a continuous flow of information from left to right. Show the critical path clearly and graphically on the

chart with solid bars. Organize the bar chart by Work Area groupings. Also, provide an electronic copy to the Contracting Officer.

1.6.1 Earned Value Report

The Earned Value Report is based on the Schedule of Prices from the accepted cost loaded Baseline Project Schedule. No activities can be billed until they are 100%. No Billing can be submitted without an accepted Schedule of Prices. See Section 01 20 00 PRICE AND PAYMENT PROCEDURES for additional requirements. Breakdown of the Schedule of Prices should be in the following columns.

a. Activity Name Hammock

b. Subtask activity

c. Paid

d. This pay request

e. Remaining Contract Work

1.6.2 Project Summary Narrative Report

The Project Summary Narrative Report is an analysis that must be submitted with the monthly Schedule update. This report shall indicate all critical path activities that are behind schedule by more than 7 calendar days, describe the cause of the delay and remedial action being taken to correct the schedule slippage. This report must be signed by the Contractor's Project Manager for this Contract. The Project Summary Narrative Report must identify and justify the following:

a. Progress made in each area of the Project

b. Longest Path: Include printed copy on 11 by 17 inch paper, landscape setting

c. Date/time constraint(s), other than those required by the Contract

d. Listing of changes made between the previous Schedule and current updated Schedule including: added or removed activities, original and remaining durations for activities that have not started, logic (sequence, constraint, lag/lead), milestones, planned sequence of operations, longest path, calendars or calendar assignments, and cost loading.

e. Any decrease in previously reported activity Earned Amount

f. Pending items and status thereof, including permits, changes orders, and time extensions

g. Status of Contract Completion Date and interim milestones

h. Current and anticipated delays (describe cause of delay and corrective actions(s) and mitigation measures to minimize)

i. Description of current and future Schedule problem areas.

For each entry in the narrative report, cite the respective Activity ID

and Activity Name, the date and reason for the change, and description of the change.

1.7 3-WEEK LOOK AHEAD SCHEDULE

Prepare and issue 3-Week Look Ahead Schedules to provide a more detailed day-to-day plan of upcoming Work identified on the Project Schedule. Key the Work plans to activity numbers when a NAS is required and update each week to show the planned Work for the current and following two-week period. This Schedule will provide a detailed list of activities for Work during those weeks. Sort the activities in a logical manner, for example, by area of the building and trade. Additionally, include upcoming outages, closures, preparatory meetings, and initial meetings. Identify critical path activities on the Three-Week Look Ahead Schedule. The detail Work plans are to be bar chart type Schedules, produced from, but maintained separately from the last Monthly Project Schedule Update.

Produce and maintain Look Ahead Schedules using an electronic spreadsheet program. Print the bar charts on 11 by 17 inch sheets, with a title block and a calendar day timeline on each page. Time scale the chart to show a continuous flow of information from left to right. Show the critical path clearly and graphically on the chart with solid bars. Organize the bar chart by subcontractor groupings. Provide blank lines between each activity to allow for detailed breakdown into sub-activities. These shall indicate all upcoming and on-going Work in the next 3 weeks from the date of the meeting.

Activities must not exceed 5 working days in duration and have sufficient level of detail to assign crews, tools and equipment required to complete the Work.

E-mail to Contracting Officer and provide hard copies upon request no later than 8 a.m. each Monday, and review during the weekly Quality Control Coordination or Production Meeting. Make copies available to all meeting participants and electronically.

1.8 SCHEDULE SUBMITTALS AND PROCEDURES

This section applies to submission of all Project Schedule components.

1.8.1 Submittal Timing

Submit the Project Schedule according to the following timetable.

a. Project Baseline Schedules: Submit the Baseline Project Schedule to the Contracting Officer a minimum of 14 working days prior to the preconstruction meeting.

b. Monthly Updates: With the monthly pay request or at a minimum once every 30 calendar days.

c. 3-Week Look Ahead Schedules: No later than 24 hours prior to the Weekly Progress Meeting.

1.8.2 Acceptance of the Project Schedule

The Contracting Officer will review the Schedule for compliance with the Contract requirements (such as phasing, payment, etc.) only. Sequencing and scheduling of construction for completion of the contractually

required Work is the responsibility of the Contractor. Contracting Officer's acceptance of the Schedule and any subsequently modified Schedules does not relieve the Contractor of any Contract requirements omitted and not found by the Contracting Officer. The Contracting Officer will not approve or accept the Schedule and its critical path as being correct, achievable or the most effective and/or efficient means to complete the Project within the Contract period of performance. If the Schedule is rejected, re-submit at no cost to the Government.

1.8.2.1 Comments by the Contracting Officer

Comments made by the Contracting Officer or Government representatives on the Project Schedule submissions during review shall not relieve the Contractor from compliance with the requirements of the Contract documents.

Following receipt of the Contracting Officer's review comments, review the Schedule to identify missing activities and relationships relevant to the Scope of the Work. No time extensions will be granted by the Contracting Officer to complete activities not initially included in the Project Schedule submissions.

To the extent that there are any conflicts between the accepted Project Schedules and the requirements of the Contract Documents, the Contract Documents govern.

1.8.2.2 Re-Submittal Following Non-Acceptance

Should the Contracting Officer not accept the Contractor's submission of the Project Schedule, comply with the Contracting Officer's direction and resubmit the Project Schedule and all associated submittals within 7 calendar days.

1.9 CONTRACT MODIFICATIONS

Execute the Work in accordance with the accepted Project Schedule. Out of sequence construction, defined as a change from the Project Schedule in actual operations, requires prior approval from the Contracting Officer.

Upon the approval of a Contract Modification by the Contracting Officer, the agreed upon modification activities, activity durations, logic, and impacts shall be reflected in the next Schedule submittal.

No change to the approved activities, original activity durations, logic, interdependencies, milestones, planned sequence of operations, or resource and cost loading of the Project Schedule may be made without prior written approval from the Contracting Officer. If the Contractor desires to make a change to the approved Project Schedule, request permission from the Contracting officer in writing, stating the reasons for the change as well as the impacts of the change, such as the proposed changes in activities, original activity durations, logic, interdependencies, milestones, planned sequence of operations, or resource and cost loading of the Project Schedule. The Contracting Officer will respond within 14 calendar days after the receipt of the change request.

A new Progress Schedule shall be submitted for any modification(s) that adds more than 7 calendar days, either individually or cumulatively, to the critical path of the approved Project Baseline Schedule. Additionally, a new Progress Schedule shall be submitted as soon as the Contractor determines that the current progress of Work will delay the

completion date as listed on the approved Project Baseline Schedule by more than 7 calendar days.

1.9.1 Major Revisions

If the Contracting Officer considers the Project Schedule change requested to be of a major nature, the Contracting Officer may require the Contractor to revise and submit for approval, without additional cost to the Government, all of the affected portions of the network diagrams, and any Schedule reports, cost and cash flow projections, manpower forecasts, or other reports deemed necessary to show the probable effect on the entire Project. Submit the proposed network revision and required reports to the Contracting Officer within 7 calendar days after the Contracting Officer notifies that the requested revision is of a major nature. Only upon the approval of the requested change by the Contracting Officer shall it be reflected in the next Project Schedule update submitted.

A change will be considered of a major nature if the time estimated for an activity or sequence of activities is varied from the original (early start - early finish) plan to the degree that there is reasonable doubt that the Contract completion date or milestones will be met, or if the change impacts the Work of other Contractors at the Project Site. Changes to activities having adequate float will be considered as minor changes, except that an accumulation of minor changes may be considered a major change when such changes affect the Contract completion date or milestones.

1.9.2 Adjustment of Effort

Whenever it becomes apparent that any critical activity completion date may not be met, take the following actions at no additional cost to the Government.

a. Increase construction manpower to put Work back on schedule; and/or

b. Increase the number of work hours per shift, shifts per day, work days per week, amount of construction equipment, or all or any combination of these actions to put Work back on schedule; and/or

c. Re-schedule activities to achieve maximum practical concurrence to place the Work back on schedule.

The Contracting Officer may also require the Contractor to submit for approval, at no additional cost to the Government, such supplementary Progress Schedules, associated reports, and other supporting data deemed necessary to demonstrate how the approved Project Schedule will be regained.

1.9.3 Time Extensions

Time extensions of the Contract completion date or milestones will be granted only to the extent that adjustments to the activity or activities affected by a Contract Modification or delay affect the critical path of activities leading to the Contract completion date or milestones. This determination will be made based on the date that the Contracting Officer issues a notice to proceed with a modification or the date an actual delay begins.

Weather delays for normal weather conditions will not be considered. Non-compensable delays for severe weather may be considered if it can be shown that the weather was unusually severe and the activities affected were on the critical path of the current, updated Project Schedule diagram. Normal weather conditions will be based on a nationally recognized statistical average for the Project Site and in accordance with this Section and Sections 01 11 00 SUMMARY OF WORK and 01 14 00 WORK RESTRICTIONS.

Approval or rejections of each time extension request will be made by the Contracting Officer within 14 calendar days after receipt of request, unless subsequent meetings and negotiations are necessary.

1.9.4 Time Impact Analysis Requirements

Submit a written Time Impact Analysis (TIA) with each cost and/or time proposal for a proposed change. TIA must illustrate the influence of each change or delay on the Contract Completion Date or milestones. No time extensions will be granted nor delay damages paid unless a delay occurs which consumes all available Project Float, and extends the Projected Finish beyond the Contract Completion Date. Each TIA must demonstrate the estimated time impact based on the date the change was issued, the events of the delay, the status of construction at that point in time, and the event time computation of all activities affected by the change or delay. The event times used in the TIA will be those included in the latest update of the Project Schedule in effect at the time the change or delay was encountered.

a. Each TIA must be in both narrative and Schedule form. The narrative must define the scope and conditions of the change; provide start and finish dates of impact, successor and predecessor activity to impact period, responsible party, describe how it originated, and how it impacts the Schedule. The Schedule submission must consist of three native files:

    (1) Fragnet used to define the scope of the changed condition and how you propose to incorporate the change order or delay into the Project Schedule. A fragnet is defined as a sequence of new activities and/or activity revisions that are proposed to be added to the existing Schedule to demonstrate the influence of delay and the method for incorporating delays and impacts into the Schedule as they are encountered.

    (2) Most recent accepted Schedule update as of the time of the proposal or claim submission that has been updated to show all activity progress as of the time of the impact start date.

    (3) The impacted Schedule that has the fragnet inserted in the updated Schedule and the Schedule "run" so that the new completion date is determined.

b. For claimed As-Built Project delay, the inserted fragnet TIA method must be modified to account for as-built events known to occur after the data date of Schedule update used.

c. TIAs must include any mitigation, and must determine the apportionment of the overall delay assignable to each individual delay. Apportionment must provide identification of delay type and classification of delay by compensable and non-compensable events.

The associated narrative must clearly describe analysis methodology used, and the findings in a chronological listing beginning with the earliest delay event.

(1) Identify and classify types of delays as follows:

(a) Force majeure delay (e.g., weather delay): Any delay event caused by something or someone other than the Government (including its agents) or the Contractor, or the risk of which has not been assigned solely to the Government or the Contractor. If the force majeure delay is on the critical path, in absence of other types of concurrent delays, the Contractor is granted an extension of Contract time, classified as a non-compensable event.

(b) A Contractor-delay: Any delay event caused by the Contractor, or the risk of which has been assigned solely to the Contractor. If the Contractor-delay is on the critical path, in absence of other types of concurrent delays, Contractor is not granted extension of Contract time, and classified as a non-compensable event. Where absent other types of delays, and having impact to Project completion, provide a Corrective Action Plan, identifying plan to mitigate delay, to the Contracting Officer.

(c) A Government-delay: Any delay event caused by the Government, or the risk of which has been assigned solely to the Government. If the Government-delay is on the longest path, in absence of other types of concurrent delays, the Contractor is granted an extension of Contract time, and classified as a compensable event.

(2) Use functional theory to analyze concurrent delays, where: Separate delay issues delay Project completion, do not necessarily occur at same time, rather occur within same monthly Schedule update period at minimum, or within same as-built period under review. If a combination of functionally concurrent delay types occurs, it is considered Concurrent Delay, which is defined in the following combinations:

(a) Government-delay concurrent with Contractor-delay: Excusable time extension, classified non-compensable event.

(b) Government-delay concurrent with force majeure delay: Excusable time extension, classified non-compensable event.

(c) Contractor-delay concurrent with force majeure delay: Excusable time extension, classified non-compensable event.

(3) A pacing delay, reacting to another delay (parent delay) equally or more critical than paced activity, must be identified prior to pacing. Contracting Officer will notify Contractor prior to pacing. Contractor must notify Contracting Officer prior to pacing. Notification must include identification of parent delay issue, estimated parent delay time period, paced activity(s) identity, and pacing reason(s). Pacing Concurrency is defined as follows:

(a) Government-delay concurrent with Contractor-pacing: Excusable time extension, classified compensable event.

(b) Contractor-delay concurrent with Government-pacing:

Inexcusable time extension, classified non-compensable event.

1.10 FAILURE TO COMPLY

1.10.1 Failure to Submit Project Schedule and Updates

If the Contractor fails to submit the Project Schedule network diagrams and computer tabulations, the cash flow projections, written confirmation of subcontractors and suppliers, or electronic copies within the time prescribed, the Contracting Officer may stop all Work progress payments until the required submittals are provided. Acceptance of the Project Schedule is a condition for payment of any portion of the Contract amount.

1.10.2 Failure to Comply with Contracting Officer's Requirements

Failure to comply with the requirements of the Contracting Officer will be grounds for a determination by the Contracting Officer that the Contractor is not prosecuting the Work with such diligence as will insure completion within the time or times specified. Upon such determination, the Contracting Officer may terminate the Contractor's right to proceed with the Work, or any separable part thereof, in accordance with the applicable provisions of the Contract.

1.11 CORRESPONDENCE AND TEST REPORTS:

Correspondence (e.g., letters, Requests for Information (RFIs), e-mails, meeting minute items, Production and QC Daily Reports, material delivery tickets, photographs) must reference Schedule Activities that are being addressed. Test reports (e.g., concrete, soil compaction, weld, pressure) must reference Schedule Activities that are being addressed.

1.12 ADDITIONAL SCHEDULING REQUIREMENTS

Any references to additional scheduling requirements, including systems to be inspected, tested and commissioned, that are located throughout the remainder of the Contract Documents, are subject to all requirements of this section.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

-- End of Section --

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SECTION 01 33 00

SUBMITTAL PROCEDURES
11/21

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.

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-21	Specifications and Drawings for Construction

1.2 SUMMARY

This section includes the general requirements of the Contractor pertaining to submissions to the Contracting Officer required under this Work.

1.2.1 Submittal Information

The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Units of weights and measures used on all submittals are to be the same as those used in the contract drawings.

1.2.2 Project Type

The Contractor's Quality Control Manager are to check and approve all items before submittal and stamp, sign, and date indicating action taken. Contractor's Quality Control Manager shall certify that each submittal is in compliance with Contract requirements prior to submitting to Contracting Officer. Proposed deviations from the Contract requirements are to be clearly identified. Include within submittals items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals.

1.2.3 Constraints

Conform to provisions of this Specification, unless explicitly stated otherwise for submittals listed or specified in this Contract.

Submit complete submittals for each definable feature of the Work. At the same time, submit components of definable features that are interrelated as a system.

When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, the submittal will be returned without review.

Approval of a separate material, product, or component does not imply approval of the assembly in which the item functions.

1.2.4 Submission of Submittals

Schedule and provide submittals requiring Government approval before acquiring the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Safety Data Sheets (SDS) and in compliance with existing laws and regulations.

1.3 DEFINITIONS

1.3.1 Submittal Descriptions (SD)

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

SD-01 Preconstruction Submittals

Submittals that are required prior to commencing with the start of Work on Site or starting construction on certain elements of the Work.

Examples of Preconstruction Submittals include but are not limited to: schedules; forms; specialized work plans; Quality Control, Safety, and Environmental Protection plans; etc.

SD-03 Product Data

Preprinted material from the manufacturer demonstrating conformance to Specifications. This may include catalog data, illustrations, schedules, diagrams, performance charts, engineering data, test results, instructions, brochures, etc. illustrating size, physical appearance and other characteristics of materials, systems or equipment.

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

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accordance with specified requirements. Unless specified in another section, testing must have been within three years of date of Contract award for the Project.

Report that includes findings of a test required to be performed on an actual portion of the Work or prototype prepared for the Project before shipment to the Project Site.

Report that includes finding of a test made at the Project Site or on sample taken from the Project Site, on a portion of Work during or after installation.

SD-07 Certificates

Certificates may be required of products, installations, procedures, employee qualifications, workmanship, or as otherwise required. Certificates shall be in the form of a written letter, signed by the Owner or some other official with the authority to so obligate the Contractor, subcontractor, manufacturer, or vendor.

Certificates including statements from a manufacturer shall be printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that the product, system, or material meets Specification requirements. Must be dated after award of Project Contract and clearly name the Project.

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

Confined space entry permits

Text of posted operating instructions

SD-08 Manufacturer's Instructions

Preprinted material describing installation, operation, and/or maintenance of a product, system or material, including special notices and (SDS) concerning impedances, hazards and safety precautions.

SD-10 Operation and Maintenance Data

Data provided by the manufacturer, or the system provider, including manufacturer's help and product line documentation, necessary to maintain and install equipment, for operating and maintenance use by facility personnel.

Data required by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

Data incorporated in an operations and maintenance manual or control system.

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data.

SD-11 Closeout Submittals

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

Submittals required for Third Party Certification (TPC).

Special requirements necessary to properly close out a Construction

Contract. For example, Record Drawings and As-Built Drawings. Also, submittal requirements necessary to properly close out a major phase of construction on a multi-phase Contract.

1.3.2 Approving Authority

Office or designated person authorized by the Contracting Officer to approve the submittal.

1.3.3 Work

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

1.4 SUBMITTALS

Submit the following in accordance with this section.

SD-01 Preconstruction Submittals

Submittal Register

1.5 SUBMITTAL CLASSIFICATION

1.5.1 Government Approval

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

For this project assume all submittals require Government Approval unless otherwise stated.

1.5.2 For Information Only

Submittals not requiring Government approval will be for information only.

1.6 FORWARDING SUBMITTALS REQUIRING GOVERNMENT APPROVAL

As soon as practicable after award of contract, and before procurement or fabrication, forward to the COR, U.S. Coast Guard CEU Juneau, and Architect-Engineer: JYW, submittals required in the technical sections of this specification, including shop drawings, product data and samples. In addition, forward a copy of the submittals to the Contracting Officer.

1.6.1 O&M Data

Submit data specified for a given item within 30 calendar days after the item is delivered to the contract site.

In the event the Contractor fails to deliver O&M data within the time limits specified, the Contracting Officer may withhold from progress payments 50 percent of the price of the items to which such O&M data apply.

1.7 PREPARATION

1.7.1 Transmittal Form

Use the U.S. Coast Guard standard transmittal form as the cover page for all submittals. This form is provided as "Atachment 1 - Submittal Transmittal Form" to these Specifications.

Each line item on the Submittal Register shall be a separate submittal. Individual submittals shall be listed as separate line item numbers on the Submittal Transmittal Form. Only two line items shall be listed per form, and both items shall be from the same Specification section to avoid confusion.

The Contractor shall complete only the top portion of the form, electronically or with ball-point pen. **All forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.**

Number each form, including resubmissions, in a sequential order based on the date submitted to the Contracting Officer.

Utilize the same Specification section, paragraph number, and description of material as listed in the Submittal Register when filling out the form. The form shall clearly identify the product being submitted. If more than one product or options for a product are included in the submittal, clearly indicate which product or option is being submitted by one of the following methods:

a. Highlight the product or option with a yellow highlighter.

b. Circle the product or option with a bold red circle or cloud.

c. Point to the product or option with a bold red arrow.

1.7.2 Submittal Media

The preferred format for submittals for both Approval and For-Information-Only is PDF delivered electronically to the Contracting Officer. If the Contractor chooses to provide hard copies of submittals, then any schedule impacts, and all reproduction and delivery fees shall be entirely at the Contractor's expense with the following exceptions:

a. Material samples required for SD-04 Samples items.

b. O&M manuals required for SD-10 Operation and Maintenance Data.

The Contractor shall include costs for the above submittal types in their bid/proposal and shall incorporate all necessary lead times in the Baseline Schedules. Submit hard copies of the above submittal types in accordance with paragraph QUANTITY OF SUBMITTALS.

1.7.2.1 Electronic File Format

DO NOT compress ("zip") electronic files to be submitted to the U.S. Coast Guard. File compression is prohibited.

Only one submittal form cover page shall be included with each submission. Compile the submittal file as a single, complete document, to include the Transmittal Form described within. Name the electronic submittal file specifically according to its contents, and coordinate the file naming convention with the Contracting Officer.

Electronic files must be of sufficient quality that all information is legible. Use PDF as the electronic format, unless otherwise specified or directed by the Contracting Officer. Generate PDF files from original documents with bookmarks so that the text included in the PDF file is searchable and can be copied. If documents are scanned, optical character resolution (OCR) routines are required. Index and bookmark files exceeding 30 pages to allow efficient navigation of the file.

When required, the electronic file must include a valid electronic signature or a scan of a signature.

1.7.2.2 Hard Copy Format

If the Contractor prefers to mail hard copies, unless specifically noted otherwise under paragraph QUANTITY OF SUBMITTALS, or if requested by the Contracting Officer, provide the Contracting Officer with three complete copies of the original submittal material with each submission. The Contractor will determine the total number of copies, depending upon the need to redistribute them to subcontractors and suppliers. The Government will keep two copies, and return the rest to the Contractor. Only one submittal form cover page shall be included with each submission.

1.7.2.3 Delivery

1.7.2.3.1 Electronic File Delivery

Electronic submittal packages less than 10 MB may be emailed directly to the intended recipients. Coordinate with Contracting Officer as required to establish secure file transfer protocol for electronic submittal packages larger than 10 MB.

1.7.2.3.2 Mailing

All hard copy submittals shall be sent directly to one of the following addresses:

USPS Mailing Address
ATTN: Intended Recipient
(to be assigned by KO)
CG Civil Engineering Unit Juneau
P.O. BOX 25517
Juneau, AK 99802-5517

FedEx or UPS Shipping Address:
ATTN: Intended Recipient
(to be assigned by KO)
CG Civil Engineering Unit Juneau
709 West 9th Street, Room 817
Juneau, Alaska 99801

1.7.3 Submittal Format

1.7.3.1 Format of SD-01 Preconstruction Submittals

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

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

1.7.3.2 Format for SD-02 Shop Drawings

Provide Shop Drawings not less than 8 1/2 by 11 inches nor more than 22 by 34 inches, except for full-size patterns or templates. Prepare Drawings to accurate size, with scale indicated, unless another form is required. Ensure Drawings are suitable for reproduction and of a quality to produce clear, distinct lines and letters, with dark lines on a white background.

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

b. Dimension Drawings, except diagrams and schematic Drawings. Prepare Drawings demonstrating interface with other trades to scale. Use the same unit of measure for Shop Drawings as indicated on the Contract Drawings. Identify materials and products for Work shown.

1.7.3.2.1 Drawing Identification

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

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

1.7.3.3 Format of SD-03 Product Data

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

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

1.7.3.3.1 Product Information

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

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

1.7.3.3.2 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of organizations including but not limited to the American National Standards Institute (ANSI), ASTM

International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), etc., submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.7.3.3.3 Data Submission

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

Submit the manufacturer's instructions before installation.

1.7.3.4 Format of SD-04 Samples

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

a. Sample of Equipment or Device: Full size.

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

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

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

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

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

g. Sample Panel: 4 by 4 feet.

h. Sample Installation: 100 square feet.

1.7.3.4.1 Comparison Sample

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

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

1.7.3.5 Format of SD-05 Design Data

Provide design data and certificates on 8 1/2 by 11 inch page size.

1.7.3.6 Format of SD-06 Test Reports

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

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

1.7.3.7 Format of SD-07 Certificates

Provide design data and certificates on 8 1/2 by 11 inch page size.

Provide a bound volume for submittals containing numerous pages.

1.7.3.8 Format of SD-08 Manufacturer's Instructions

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

Submit the manufacturer's instructions before installation.

1.7.3.8.1 Standards

Where equipment or materials are specified to conform to industry or technical-society reference standards of organizations including but not limited to the American National Standards Institute (ANSI), ASTM International (ASTM), National Electrical Manufacturer's Association (NEMA), Underwriters Laboratories (UL), etc., submit proof of such compliance. The label or listing by the specified organization will be acceptable evidence of compliance. In lieu of the label or listing, submit a certificate from an independent testing organization, competent to perform testing, and approved by the Contracting Officer. State on the certificate that the item has been tested in accordance with the specified organization's test methods and that the item complies with the specified organization's reference standard.

1.7.3.9 Format of SD-09 Manufacturer's Field Reports

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

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

1.7.3.10 Format of SD-10 Operation and Maintenance Data (O&M)

Comply with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA for O&M Data format.

1.7.3.11 Format of SD-11 Closeout Submittals

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

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

1.7.4 Source Drawings for Shop Drawings

1.7.4.1 Source Drawings

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

1.7.4.2 Terms and Conditions

Data contained on these electronic files must not be used for any purpose other than as a convenience in the preparation of construction data for the referenced Project. Any other use or reuse is at the sole risk of the Contractor and without liability or legal exposure to the Government. The Contractor must make no claim, and waives to the fullest extent permitted by law any claim or cause of action of any nature against the Government, its agents, or its subconsultants that may arise out of or in connection with the use of these electronic files. The Contractor must, to the fullest extent permitted by law, indemnify and hold the Government harmless against all damages, liabilities, or costs, including reasonable attorney's fees and defense costs, arising out of or resulting from the use of these electronic files.

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

1.8 QUANTITY OF SUBMITTALS

1.8.1 Number of SD-02 Shop Drawing Copies

Unless otherwise specified, submit two copies of submittals of Shop Drawings requiring review and approval by a QC organization. Submit three copies of Shop Drawings requiring review and approval by the Contracting Officer.

1.8.2 Number of SD-04 Samples

a. Submit two samples, or two sets of samples showing the range of variation, of each required item. One approved sample or set of samples will be retained by the approving authority and one will be returned to the Contractor.

b. Submit one sample panel or provide one sample installation where directed. Include components listed in the technical section or as directed.

c. Submit one sample installation, where directed.

d. Submit one sample of nonsolid materials.

1.8.3 Number of SD-05 Design Data Copies

Submit in compliance with quantity requirements specified for Shop Drawings.

1.8.4 Number of SD-10 Operation and Maintenance Data Copies

Submit three copies complying with the requirements specified in Section 01 78 23 OPERATION AND MAINTENANCE DATA.

1.9 INFORMATION ONLY SUBMITTALS

Submittals for information only must be certified by the QC manager and submitted to the Contracting Officer. Approval of the Contracting Officer is not required on information only submittals. The Contracting Officer will mark "receipt acknowledged" on submittals for information and will return only the transmittal cover sheet to the Contractor. Normally, submittals for information only will not be returned. However, the Government reserves the right to return unsatisfactory submittals and require the Contractor to resubmit any item found not to comply with the Contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and Specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the Work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical Specifications so prescribe.

1.10 PROJECT SUBMITTAL REGISTER

A sample Project Submittal Register showing items of equipment and materials for when submittals are required by the Specifications is provided as "Attachment 2 - Submittal Register" to these Specifications. The Contractor is ultimately responsible for ensuring all necessary submittals are included in the Submittal Register and shall submit

proposed revisions to the Contracting Officer for approval.

1.10.1 Submittal Management

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

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

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

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

Column (f): This column is not used by the U.S. Coast Guard, leave blank or insert a dash, not used, N/A, etc.

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

1.10.2 Preconstruction Use of Submittal Register

Submit the submittal register within 15 calendar days after receipt of Notice of Construction Contract Award. Include the QC plan and the Project Schedule. Verify that all submittals required by the Contract/Task Order are listed and add missing submittals. Coordinate and complete the following fields on the register submitted with the QC plan and the Project Schedule:

Column (a) Activity Number: Activity number from the Project Schedule.

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

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

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

1.10.3 Contractor Use of Submittal Register

Update the following fields with each submittal throughout the Contract.

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

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

Column (l) Date submittal transmitted.

Column (q) Date approval was received.

1.10.4 Approving Authority Use of Submittal Register

Update the following fields:

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

Column (l) Date submittal was received.

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

Column (q) Date of return to Contractor.

1.10.5 Action Codes

"A" - "Approved as submitted"; "Accepted"; "Agreed"

"AN" - "Approved as noted"

"I" - "For Information Only"

"RR" - "Disapproved as submitted"; "Revise and Resubmit"

"CR" - "Check and Resolve"

"NR" - "Not Reviewed"

"RA" - "Receipt Acknowledged"

1.10.6 Delivery of Copies

Maintain an up-to-date Submittal Register at the Project Site.

Submit an updated electronic copy of the submittal register to the Contracting Officer with each invoice request.

Provide an updated Submittal Register monthly regardless of whether an invoice is submitted.

1.11 VARIATIONS

Variations from Contract requirements require Contracting Officer approval pursuant to Contract Clause FAR 52.236-21 Specifications and Drawings for Construction, and will be considered where advantageous to the Government.

1.11.1 Considering Variations

Discussion of variations with the Contracting Officer before submission will help ensure that functional and quality requirements are met and minimize rejections and resubmittals. When contemplating a variation that

results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

Specifically point out variations from Contract requirements in transmittal letters. Failure to point out variations may cause the Government to require rejection and removal of such Work at no additional cost to the Government.

1.11.2 Proposing Variations

If a submission includes a request for a variation from or change in the Contract requirements, the following statement shall be provided in the comments section of the Submittal Transmittal Form, and the statement shall be highlighted in yellow:

"THIS SUBMITTAL REFLECTS A REQUEST FOR A VARIATION FROM OR A CHANGE IN THE REQUIREMENTS OF THE PROJECT DRAWINGS AND/OR SPECIFICATIONS."

When proposing variation, include a written request to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. Include the DOR's written analysis and approval. If lower cost is a benefit, also include an estimate of the cost savings. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.11.3 Warranting that Variations are Compatible

When delivering a variation for approval, the Contractor warrants that this Contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of Work.

1.11.4 Review Schedule Extension

In addition to the normal submittal review period, a period of 14 days will be allowed for the Government to consider submittals with variations.

1.12 SCHEDULING

Schedule and submit concurrently product data and Shop Drawings covering component items forming a system or items that are interrelated. Submit pertinent certifications at the same time. No delay damages or time extensions will be allowed for time lost in late submittals. .

a. Coordinate scheduling, sequencing, preparing, and processing of submittals with performance of Work so that Work will not be delayed by submittal processing. The Contractor is responsible for additional time required for Government reviews resulting from required resubmittals. The review period for each resubmittal is the same as for the initial submittal.

b. Submittals required by the Contract documents are listed on the submittal register. If a submittal is listed in the submittal register but does not pertain to the Contract Work, the Contractor is to include the submittal in the register and annotate it "N/A" with a brief explanation. Approval by the Contracting Officer does not relieve the Contractor of supplying submittals required by the Contract documents but that have been omitted from the register or marked "N/A."

c. Resubmit the submittal register and annotate it monthly with actual submission and approval dates. When all items on the register have been fully approved, no further resubmittal is required.

1.12.1 Government Review Period

Except as specified otherwise, the Government shall have 14 calendar days to review each submittal, or resubmittal, based on the day the submittal is received and logged in by the Contracting Officer. Each Submittal Transmittal Form will be stamped with the date received. The period of review for submittals with Contracting Officer approval begins when the Government receives the submittal from the Contractor.

1.13 GOVERNMENT APPROVING AUTHORITY

The Contracting Officer is the only approving authority for submittals, the Contracting Officer will:

a. Stamp the Submittal Transmittal Form with the date received.

b. Review submittals for approval within the scheduling period specified and only for conformance with Project design concepts and compliance with Contract documents.

c. Identify returned submittals with one of the actions defined in paragraph REVIEW NOTATIONS and with comments and markings appropriate for the action indicated.

Upon completion of review of submittals, stamp and date the submittal response.

1.13.1 Review Notations

Submittals will be returned to the Contractor with the following notations:

a. Submittals marked "approved" or "accepted" authorize proceeding with the Work covered.

b. Submittals marked "approved as noted" or "approved, except as noted, resubmittal not required," authorize proceeding with the Work covered provided that the Contractor takes no exception to the corrections.

c. Submittals marked "rejected," "not approved," "disapproved," or "revise and resubmit" indicate incomplete submittal or noncompliance with the Contract requirements or design concept. Resubmit with appropriate changes along with a written response, in **bold** font to each review comment. Do not proceed with Work for this item until the resubmittal is approved.

d. Submittals marked "not reviewed" indicate that the submittal has been previously reviewed and approved, is not required, does not have evidence of being reviewed and approved by Contractor, or is not complete. A submittal marked "not reviewed" will be returned with an explanation of the reason it is not reviewed. Resubmit submittals returned for lack of review by Contractor or for being incomplete, with appropriate action, coordination, or change.

e. Submittals marked "receipt acknowledged" indicate that submittals have been received by the Government. This applies only to "information-only submittals" as previously defined.

1.14 DISAPPROVED SUBMITTALS

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

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

The Government shall not be responsible for delays in construction schedule due to the rejection of incomplete submittals, or rejection of submittals that do not demonstrate compliance with the requirements of the Contract Documents.

1.15 APPROVED SUBMITTALS

The Contracting Officer's approval of submittals is not to be construed as a complete check, and indicates only that the general method of construction, materials, detailing, and other information are in general conformance with the design concept of the Project and general compliance with the information provided in the Contract documents. The Contractor is responsible for confirming and correlating all quantities and dimensions, selecting fabrication processes and techniques of construction; coordinating Work with that of all other trades; and performing the Work in a safe and satisfactory manner.

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

Submittals are only approved when the Submittal Transmittal Form is appropriately completed and signed by the Contracting Officer. There is no concept of verbal approval for submittals.

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

1.16 APPROVED SAMPLES

Approval of a sample is only for the characteristics or use named in such approval and is not be construed to change or modify any Contract requirements. Before submitting samples, provide assurance that the

materials or equipment will be available in quantities required in the Project. No change or substitution will be permitted after a sample has been approved.

Match the approved samples for materials and equipment incorporated in the Work. If requested, approved samples, including those that may be damaged in testing, will be returned to the Contractor, at its expense, upon completion of the Contract. Unapproved samples will also be returned to the Contractor at its expense, if so requested.

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

Samples of various materials or equipment delivered on the Site or in place may be taken by the Contracting Officer for testing. Samples failing to meet Contract requirements will automatically void previous approvals. Replace such materials or equipment to meet Contract requirements.

1.17 WITHOLDING OF PAYMENT

Payment for materials incorporated in the Work will not be made if required approvals have not been obtained.

1.18 Contractor Certification Stamp (Prior to Submittal to Government)

Certify the submittal data as follows on the U.S. Coast Guard Submittal Transmittal Form: "I certify that the above submitted items had been reviewed in detail and are correct and in strict conformance with the Contract Drawings and Specifications except as otherwise stated.

_____NAME OF CONTRACTOR _____ SIGNATURE OF CONTRACTOR

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

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SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS
11/21

PART 1 GENERAL

1.1 GENERAL

1.1.1 Work Covered

This section includes the general requirements of the Contractor regarding compliance with federal and state regulations pertaining to occupational safety and health of workers during performance of Work, including identification of applicable Laws and Regulations, Submittals, notification requirements, and Health and Safety execution Specifications.

Primary hazards at the Site are: Work at heights, asbestos, lead, and energized utilities. The Contractor's Health and Safety Program shall include provisions for all workers, including subcontractor's to receive appropriate awareness training for these hazards.

Consult and comply with the requirements of 29 CFR 1910, 29 CFR 1926, 8 AAC 61 Article 11, and with the requirements as stipulated herein.

1.1.2 Contractor's General Responsibilities for Health and Safety

Comply with any and all state, federal, and local ordinances, Laws and Regulations.

The Contractor is responsible for the Health and Safety of the Contractor's employees, it's subcontractors, suppliers, agents, inspectors, visitors, the general public, and any others associated with or interacting with the Contractor who provides labor, goods, or other services on the Site.

The Contractor shall be responsible for emergency response planning and notification, and for actual response to any and all emergencies that may occur during the course of the Work, including emergencies that may occur when the Contractor is not present at the Site.

The Contractor is responsible for communicating daily with the Contracting Officer regarding Health and Safety issues. Such communication shall not imply any duty or responsibility on the part of the Contracting Officer with regard to Health and Safety of the Contractor's employees, it's subcontractors, suppliers, the general public, or others. The Contractor shall have responsibility and duty to the Contracting Officer to communicate Health and Safety issues accurately and in a timely manner.

The Contractor shall be responsible for implementing a behavior-based safety process and providing Site training, observation, and feedback for Contractor personnel employed at the Site.

1.2 REFERENCES

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

ALASKA ADMINISTRATIVE CODE (AAC)

8 AAC 61 Article 11	Occupational Safety and Health Standards

AMERICAN SOCIETY OF SAFETY PROFESSIONALS (ASSP)

ASSP A10.22	(2007; R 2017) Safety Requirements for Rope-Guided and Non-Guided Workers' Hoists
ASSP A10.34	(2021) Protection of the Public on or Adjacent to Construction Sites
ASSP A10.44	(2020) Control of Energy Sources (Lockout/Tagout) for Construction and Demolition Operations
ASSP Z244.1	(2016) The Control of Hazardous Energy Lockout, Tagout and Alternative Methods
ASSP Z359.0	(2018) Definitions and Nomenclature Used for Fall Protection and Fall Arrest
ASSP Z359.1	(2020) The Fall Protection Code
ASSP Z359.2	(2017) Minimum Requirements for a Comprehensive Managed Fall Protection Program
ASSP Z359.3	(2019) Safety Requirements for Lanyards and Positioning Lanyards
ASSP Z359.4	(2013) Safety Requirements for Assisted-Rescue and Self-Rescue Systems, Subsystems and Components
ASSP Z359.6	(2016) Specifications and Design Requirements for Active Fall Protection Systems
ASSP Z359.7	(2019) Qualification and Verification Testing of Fall Protection Products
ASSP Z359.11	(2014) Safety Requirements for Full Body Harnesses
ASSP Z359.12	(2019) Connecting Components for Personal Fall Arrest Systems
ASSP Z359.13	(2013) Personal Energy Absorbers and Energy Absorbing Lanyards
ASSP Z359.14	(2014) Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems
ASSP Z359.15	(2014) Safety Requirements for Single Anchor Lifelines and Fall Arresters for Personal Fall Arrest Systems

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME B30.3	(2020) Tower Cranes
ASME B30.5	(2018) Mobile and Locomotive Cranes
ASME B30.7	(2016) Winches
ASME B30.8	(2020) Floating Cranes and Floating Derricks
ASME B30.9	(2018) Slings
ASME B30.20	(2018) Below-the-Hook Lifting Devices
ASME B30.22	(2016) Articulating Boom Cranes
ASME B30.23	(2016) Personnel Lifting Systems Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings
ASME B30.26	(2015; R 2020) Rigging Hardware

ASTM INTERNATIONAL (ASTM)

ASTM F855	(2019) Standard Specifications for Temporary Protective Grounds to Be Used on De-energized Electric Power Lines and Equipment

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-2	Differing Site Conditions
FAR 52.243-4	Changes

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)

IEEE 1048	(2016) Guide for Protective Grounding of Power Lines
IEEE C2	(2017; Errata 1-2 2017; INT 1 2017) National Electrical Safety Code

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10	(2018; ERTA 1-2 2018) Standard for Portable Fire Extinguishers
NFPA 241	(2019) Standard for Safeguarding Construction, Alteration, and Demolition Operations
NFPA 306	(2019) Standard for the Control of Gas Hazards on Vessels
NFPA 51B	(2019; TIA 20-1) Standard for Fire Prevention During Welding, Cutting, and

	Other Hot Work
NFPA 70	(2020; ERTA 20-1 2020; ERTA 20-2 2020; TIA 20-1; TIA 20-2; TIA 20-3; TIA 20-4) National Electrical Code
NFPA 70E	(2021) Standard for Electrical Safety in the Workplace

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA)

TIA-222	(2018H; Add 1 2019) Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures
TIA-1019	(2012; R 2016) Standard for Installation, Alteration and Maintenance of Antenna Supporting Structures and Antennas

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

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1910.146	Permit-required Confined Spaces
29 CFR 1910.147	The Control of Hazardous Energy (Lock Out/Tag Out)
29 CFR 1910.333	Selection and Use of Work Practices
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1915.89	Control of Hazardous Energy (Lockout/Tags-Plus)
29 CFR 1919	Gear Certification
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926.1400	Cranes and Derricks in Construction
29 CFR 1926.32	Definitions
29 CFR 1926.53	Ionizing Radiation
29 CFR 1926.54	Nonionizing Radiation
29 CFR 1926.450	Scaffolds
29 CFR 1926.454	Scaffolds, Training Requirements
29 CFR 1926.500	Fall Protection

29 CFR 1926.503	Fall Protection, Training Requirements
29 CFR 1926.552	Material Hoists, Personal Hoists, and Elevators
29 CFR 1926.553	Base-Mounted Drum Hoists
29 CFR 1926.650	Excavations
29 CFR 1926, Subpart K	Electrical
29 CFR 1926, Subpart L	Scaffolds
29 CFR 1926, Subpart M	Fall Protection
29 CFR 1926, Subpart AA	Confined Spaces in Construction
29 CFR 1926, Subpart CC	Cranes & Derricks in Construction
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
CPL 02-01-056	(2014) Inspection Procedures for Accessing Communication Towers by Hoist
CPL 2.100	(1995) Application of the Permit-Required Confined Spaces (PRCS) Standards, 29 CFR 1910.146

1.3 DEFINITIONS

1.3.1 Abatement

Abatement includes removal of materials as required to facilitate the Work, and, removal to the extent that hazardous material is controlled/removed presenting no continuing release of hazard to building occupants.

1.3.2 Carcinogen

A substance or agent capable of causing cancer.

1.3.3 Chemical

Any manufactured, processed or refined chemical compound. This includes any paint or coating, solvent, sealant, adhesive, salt, acid, alkali, herbicide, pesticide, preservative, or petroleum product.

1.3.4 Combustible

Any substance having a flashpoint at or above 100 F and below 200 F.

1.3.5 Competent Person (CP)

The CP is a person designated in writing, who, through training, knowledge and experience, is capable of identifying, evaluating, and addressing

existing and predictable hazards in the working environment or working conditions that are dangerous to personnel, and who has authorization to take prompt corrective measures with regards to such hazards.

1.3.6 Competent Person, Confined Space

The CP, Confined Space, is a person meeting the competent person requirements as defined by 29 CFR 1926.32, with thorough knowledge of OSHA's Confined Space Standards, 29 CFR 1910.146 and 29 CFR 1926, Subpart AA, and designated in writing to be responsible for the immediate supervision, implementation and monitoring of the confined space program, who through training, knowledge and experience in confined space entry is capable of identifying, evaluating and addressing existing and potential confined space hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.3.7 Competent Person, Cranes and Rigging

The CP, Cranes and Rigging, as defined by 29 CFR 1926.1400, is a person meeting the competent person requirements, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the Crane and Rigging Program, who through training, knowledge and experience in crane and rigging is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.3.8 Competent Person, Excavation/Trenching

A CP, Excavation/Trenching, is a person meeting the competent person requirements as defined by 29 CFR 1926.650, who has been designated in writing to be responsible for the immediate supervision, implementation and monitoring of the excavation/trenching program, who through training, knowledge and experience in excavation/trenching is capable of identifying, evaluating and addressing existing and potential hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.3.9 Competent Person, Fall Protection

The CP, Fall Protection, is a person meeting the competent person requirements as defined by 29 CFR 1926.32 and in accordance with ASSP Z359.0 and 29 CFR 1926, Subpart M, who has been designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the fall protection program, who through training, knowledge and experience in fall protection and rescue systems and equipment, is capable of identifying, evaluating and addressing existing and potential fall hazards and, who has the authority to take prompt corrective measures with regard to such hazards.

1.3.10 Competent Person, Scaffolding

The CP, Scaffolding is a person meeting the competent person requirements of 29 CFR 1926.450, and designated in writing by the employer to be responsible for immediate supervising, implementing and monitoring of the scaffolding program. The CP for Scaffolding has enough training, knowledge and experience in scaffolding to correctly identify, evaluate and address existing and potential hazards and also has the authority to take prompt corrective measures with regard to these hazards. CP qualifications must be documented and include experience on the specific

scaffolding systems/types being used, assessment of the base material that the scaffold will be erected upon, load calculations for materials and personnel, and erection and dismantling. The CP for scaffolding must have a documented, minimum of 8-hours of scaffold training to include training on the specific type of scaffold being used (e.g., mast-climbing, adjustable, tubular frame), in accordance with 29 CFR 1926.454.

1.3.11 Competent Person (CP) Trainer

A competent person trainer is a competent person meeting the requirements of 29 CFR 1910 and 29 CFR 1926, who is qualified in the training material presented, and who possesses a working knowledge of applicable technical regulations, standards, equipment and systems related to the subject matter on which they are training Competent Persons. A competent person trainer must be familiar with the typical hazards and the equipment used in the industry they are instructing. The training provided by the competent person trainer must be appropriate to that specific industry. The competent person trainer must evaluate the knowledge and skills of the competent persons as part of the training process.

1.3.12 Confined Space

A space that can be entered and occupied, has a limited means or entry or exit, and is not designed for continuous occupancy, or any other space as defined in 29 CFR 1910.46.

1.3.13 Corrosive

A substance that can cause visible destruction or irreversible alterations in living tissue upon contact.

1.3.14 Dust

Airborne solid particles ranging in size from 0.1 to 25 microns.

1.3.15 Flammable

Any substance having a flashpoint below 140 F.

1.3.16 HAZMAT

Hazardous Material, Any substance listed by the U.S. Department of Transportation as a hazardous material under 49 CFR 172.101 and appendices.

1.3.17 Hazardous Substance

Any substance listed by the U.S. Environmental Protection Agency as a hazardous substance under 40 CFR 116.4.

1.3.18 Health Hazard

Any chemical, pathogen or other substance that can present adverse acute or chronic effects on human health. This includes carcinogens, toxins, irritants, corrosives, sensitizers, teratogens and mutagens.

1.3.19 High Risk Activities

High Risk Activities are activities that involve Work at heights, crane and rigging, excavations and trenching, scaffolding, electrical work, and

confined space entry.

1.3.20 High Visibility Accident

A High Visibility Accident is any mishap which may generate publicity or high visibility.

1.3.21 Hot Work

Any activity involving open flame, sparks, or a heat source in excess of 100 F. This includes welding, brazing, gas cutting, soldering, and grinding.

1.3.22 Irritant

A substance which causes inflammation of the eyes, skin or respiratory system.

1.3.23 Load Handling Equipment (LHE)

LHE is a term used to describe cranes, hoists and all other hoisting equipment (hoisting equipment means equipment, including crane, derricks, hoists and power operated equipment used with rigging to raise, lower or horizontally move a load).

1.3.24 Load Handling Equipment (LHE) Accident or Load Handling Equipment Mishap

A LHE accident occurs when any one or more of the eight elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; or collision, including unplanned contact between the load, crane, or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents, even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, or roll over).

1.3.25 Medical Treatment

Medical Treatment is treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even through provided by a physician or registered personnel.

1.3.26 MSDS

Material Safety Data Sheet.

1.3.27 MSHA

Mine Safety and Health Administration.

1.3.28 Mutagen

A substance capable of altering genetic material in living tissue.

1.3.29 Near Miss

A Near Miss is a mishap resulting in no personal injury and zero property damage, but given a shift in time or position, damage or injury may have occurred (e.g., a worker falls off a scaffold and is not injured; a crane swings around to move the load and narrowly misses a parked vehicle).

1.3.30 NIOSH

National Institute for Occupational Safety and Health.

1.3.31 Occupational Illness

Any work-related exposure that results in noticeable or diagnosed health-related symptoms.

1.3.32 Occupational Injury

Any work-related accident that results in medical treatment other than first aid, loss of consciousness, restriction of work or motion, transfer to another job, or death.

1.3.33 Operating Envelope

The Operating Envelope is the area surrounding any crane or load handling equipment. Inside this "envelope" is the crane, the operator, riggers and crane walkers, other personnel involved in the operation, rigging gear between the hook, the load, the crane's supporting structure (e.g., ground or rail), the load's rigging path, the lift and rigging procedure.

1.3.34 PADS

Physical Agent Data Sheet.

1.3.35 Qualified Person (QP)

The QP is a person designated in writing, who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems related to the subject matter, the Work, or the Project.

1.3.36 Qualified Person, Fall Protection (QP for FP)

A QP for FP is a person meeting the definition requirements of 29 CFR 1910, 29 CFR 1926, and ASSP Z359.2 standard, having a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, and evaluating and specifying fall protection and rescue systems.

1.3.37 Safety Hazard

Any physical condition that presents a potential risk to human health or safety. This includes heat or cold stress, noise, dust, vibrations, or

any type of radiation. This also includes any Work that presents the possibility of falls, electrocution, fire, or other work-related accident.

1.3.38 Sensitizer

A substance which may cause adverse health effects only after repeated exposure.

1.3.39 Teratogen

A substance that when exposed to a pregnant female may result in changes to the fetus.

1.3.40 Toxin

A chemical that causes adverse health effects when ingested, absorbed through the skin or inhaled.

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Accident Prevention Plan (APP)

SD-06 Test Reports

Monthly Exposure Reports

Notifications and Reports

Accident Reports

LHE Inspection Reports

Dive Operations Plan

SD-07 Certificates

Contractor Safety Self-Evaluation Checklist

Crane Operators/Riggers

Standard Lift Plan

Critical Lift Plan

Naval Architecture Analysis

Activity Hazard Analysis (AHA)

Confined Space Entry Permit

Hot Work Permit

Certificate of Compliance

Third Party Certification of Floating Cranes and Barge-Mounted Mobile Cranes

Hazard Communication (HAZCOM) Program

1.4.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.5 MONTHLY EXPOSURE REPORTS

Provide a Monthly Exposure Report and attach to the monthly billing request. This report is a compilation of employee-hours worked each month for all Site workers, both Prime and subcontractor. Failure to submit the report may result in retention of up to 10 percent of the voucher.

1.6 CONTRACTOR SAFETY SELF-EVALUATION CHECKLIST

The Contracting Officer will provide a "Contractor Safety Self-Evaluation checklist" to the Contractor at the pre-construction conference. Complete the checklist monthly and submit with each request for payment voucher. An acceptable score of 90 or greater is required. Failure to submit the completed safety self-evaluation checklist or achieve a score of at least 90 may result in retention of up to 10 percent of the voucher. The Contractor Safety Self-Evaluation checklist can be found on the Whole Building Design Guide website at https://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/ufgs-01-35-2

The Contractor shall routinely conduct internal safety audits on Subcontract and Sub-subcontract Work Sites in accordance with the Contractor's Accident Prevention Plan. The Contractor shall conduct routine behavioral observations and provide immediate feedback during Work activities to promote safe behavior of Contractor employees and subcontractor employees.

1.7 REGULATORY REQUIREMENTS

In addition to the detailed requirements included in the provisions of this Contract, comply with the most recent edition of OSHA 29 CFR 1910, 29 CFR 1915, 29 CFR 1919, and 29 CFR 1926, and the following federal, state, and local laws, ordinances, criteria, rules and regulations. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting Work. Where the requirements of this Specification, applicable laws, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirements govern.1.8 SITE QUALIFICATIONS, DUTIES, AND MEETINGS

1.8.1 Personnel Qualifications

1.8.1.1 Responsible Person(s)

The Superintendent shall be responsible for enforcing the occupational safety and health standards as required in this section, including but not limited to the following:

a. Accident Prevention: (a) Compliance with Codes, (b) Assignment of Responsibility, (c) Safety Indoctrination/Training, (d) Inspections, Reports and Control of Hazards, (e) General Housekeeping and Cleanup, and (f) Protection of Contractor Employees, U.S. Coast Guard Personnel and Transients.

b. General Operating Procedures: (a) Material Storage and Handling, (b) Protective Equipment - Types and Use, (c) Tools and Equipment - Inspection Schedules and Operator Qualifications, (d) Motor Vehicle Operation, and (e) Specific Control of Hazards of Work to be performed (e.g., Dust, Noise, etc.).

c. Fire Prevention/Protection: (a) Identification of Hazardous Areas, and (b) Hot Work Permits, etc.

d. First Aid/Medical Working Conditions: (a) Sanitation, (b) Illumination, and (c) Ventilation.

e. Investigating/Reporting Accidents

f. The above listing is not intended to be an all-inclusive listing of areas to be covered by the Contractor's Accident Prevention Plan. The Contractor shall review the Project Specifications and Drawings to ensure that areas not covered in the above listing are included in the Accident Prevention Plan.

1.8.1.2 Safety Officer

The Contractor shall designate a Contractor's Safety Officer on the Site during the Work who shall, at a minimum, have at least one (1) year of experience as a Safety Officer, and have 30-hour Occupational Safety and Health Administration (OSHA) Construction Safety Training and Hazardous Waste Operations training, the OSHA 10 - hour Construction Safety Training and 8-hour OSHA Supervisor training. The Safety Officer may be assigned other duties.

If the Safety Officer is off-site for a period longer than 24 hours, an equally-qualified alternate Safety Officer must be provided and must fulfill the same roles and responsibilities as the primary Safety Officer. When the Safety Officer is temporarily (up to 24 hours) off-site, a Designated Representative (DR), as identified in the AHA may be used in lieu of an Alternate Safety Officer, and must be on the Project Site at all times when Work is being performed. Note that the DR is a collateral duty safety position, with safety duties in addition to their full time occupation.

1.8.1.2.1 Additional Safety Officer Requirements and Duties

The Safety Officer shall enforce the requirements of safety for all Contractor personnel on-site at all times. The Safety Officer shall ensure that all Contractor personnel, subcontractor personnel, and Contractor visitors, follow the Contractor's Accident Prevention Plan, including wearing the designated level of Personal Protective Equipment (PPE). If the Safety Officer elects to require a higher level of protection than that specified in the Accident Prevention Plan, the extra costs associated with such higher level shall be borne by the Contractor.

Prior to mobilization and continually through the duration of the Work, the Safety Officer shall inspect the Site and document area-specific and

worker-specific and general public-specific protection requirements.

After mobilization, the Safety Officer shall monitor activities and shall document the need for additional worker and public safety protection as required, based on activities performed and Action Levels specified in the Accident Prevention Plan.

The Safety Officer shall verify that all activities are performed in accordance with the Accident Prevention Plan and all federal, state, local, and Health and Safety standards, Laws and Regulations, and guidelines.

In the event of a health or safety risk, as determined by the Safety Officer or by other Contractor personnel or by the Contracting Officer, the Contractor shall not proceed with the Work until a method for handling the risk has been determined. Any health or safety risk resulting in a stoppage of Work shall be reported immediately to the Contracting Officer.

The Safety Officer may also serve as the Quality Control Manager. The Safety Officer may not serve as the Superintendent.

1.8.1.3 Competent Person Qualifications

Provide Competent Persons in accordance with 29 CFR 1910 and 29 CFR 1926 and herein. Competent Persons for high risk activities include confined space, cranes and rigging, excavation/trenching, fall protection, and Electrical Work. The CP for these activities must be designated in writing, and meet the requirements for the specific activity (e.g., competent person, fall protection).

For one who is assigned the role of a "competent person," documentation of sufficient and relevant training and experience to perform the assigned duties and responsibilities of that role. As defined in 29 CFR 1926, the competent person shall be "one who is capable of identifying existing and predictable hazards, and who has authority to take prompt corrective measures to eliminate them." Relevant training and experience shall be in the same type of Project activities included in the Work under this Contract.

The Competent Person identified in the approved Accident Prevention Plan, must be on-site at all times when the Work that presents the hazards associated with their professional expertise is being performed. Provide the credentials of the Competent Persons(s) to the the Contracting Officer for information in consultation with the Safety Office.

1.8.1.3.1 Competent Person for Confined Space Entry

Provide a Confined Space (CP) Competent Person who meets the requirements of 29 CFR 1910.146, 29 CFR 1926.32, and herein. The CP for Confined Space Entry must supervise the entry into each confined space in accordance with 29 CFR 1910.146 and 29 CFR 1926, Subpart AA.

Since this Work involves operations that handle combustible or hazardous materials, this person must have the ability to understand and follow through on the air sampling, Personal Protective Equipment (PPE), and instructions of a Marine Chemist, U.S. Coast Guard authorized persons, or Certified Industrial Hygienist. Confined Space and Enclosed Space Work must comply with NFPA 306, OSHA 29 CFR 1915, Subpart B, "Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment,"

or as applicable, 29 CFR 1910.147 for general industry.

1.8.1.3.2 Competent Person for Excavation/Trenching

The Contractor shall designate one "competent person" as defined in 29 CFR 1926, under Subpart "Excavations," to inspect and document excavation safety conditions daily, and to ensure excavation safety prior to any personnel entering an excavation

1.8.1.3.3 Competent Person for Scaffolding

Provide a Competent Person for Scaffolding who meets the requirements of 29 CFR 1926, Subpart L and herein.

1.8.1.3.4 Competent Person for Fall Protection

Provide a Competent Person for Fall Protection who meets the requirements of 29 CFR 1926, Subpart M, and herein.

1.8.1.4 Qualified Trainer Requirements

Individuals qualified to instruct the 40 hour Contract safety awareness course, or portions thereof, must meet the definition of a Competent Person Trainer, and, at a minimum, possess a working knowledge of the following subject areas: 29 CFR 1910 and 29 CFR 1926, Electrical Standards,Lockout/Tagout, Fall Protection, Confined Space Entry for Construction; Excavation, Trenching and Soil Mechanics, and Scaffolds in accordance with 29 CFR 1926.450, Subpart L.

Instructors are required to:

a. Prepare class presentations that cover construction-related safety requirements.

b. Ensure that all attendees attend all sessions by using a class roster signed daily by each attendee. Maintain copies of the roster for at least five (5) years. This is a certification class and must be attended 100 percent. In cases of emergency where an attendee cannot make it to a session, the attendee can make it up in another class session for the same subject.

c. Update training course materials whenever an update of 29 CFR 1910 or 29 CFR 1926 becomes available.

d. Provide a written exam of at least 50 questions. Students are required to answer 80 percent correctly to pass.

e. Request, review and incorporate student feedback into a continuous course improvement program.

1.8.1.5 Training

The Contractor shall provide the following training to workers potentially working in areas where hazards may be encountered:

a. When applicable: Initial 40-hour OSHA hazardous waste Health and Safety training and current annual 8-hour refresher training.

b. When applicable: enrollment in a medical monitoring program, with

clearance within the previous 12 months from a licensed physician allowing the worker to participate in field activities and use respiratory protective equipment. The Contractor shall not submit detailed medical information for employees.

c. Current respiratory fit testing certification.

d. Current cardiopulmonary resuscitation (CPR) and first aid certification for at least two workers assigned to Work on the Site.

e. Confined Space Entry Training for workers entering confined spaces.

1.8.1.6 Crane Operators/Riggers

Provide Operators, Signal Persons, and Riggers meeting the requirements in 29 CFR 1926 including but not limited to the requirements of 29 CFR 1926, Subpart CC. Provide proof of current qualification.

1.8.2 Personnel Duties

1.8.2.1 Duties of the Safety Officer

The Safety Officer must:

a. Conduct daily safety and health inspections and maintain a written log which includes area/operation inspected, date of inspection, identified hazards, recommended corrective actions, estimated and actual dates of corrections. Attach safety inspection logs to the Contractors' daily production report.

b. Conduct mishap investigations and complete required accident reports. Report mishaps and near misses.

c. Use and maintain OSHA's Form 300 to log work-related injuries and illnesses occurring on the Project Site for Prime Contractors and subcontractors, and make available to the Contracting Officer upon request. Post and maintain the Form 300A on the Site Safety Bulletin Board.

d. Maintain applicable safety reference material on the Project Site.

e. Attend the pre-construction conference, pre-work meetings including preparatory meetings, and periodic in-progress meetings.

f. Review the APP and AHAs for compliance with 29 CFR 1910 and 29 CFR 1926, and approve, sign, implement and enforce them.

g. Establish a Safety and Occupational Health (SOH) Deficiency Tracking System that lists and monitors outstanding deficiencies until resolution.

h. Ensure subcontractor compliance with safety and health requirements.

i. Maintain a list of hazardous chemicals on-site and their material Safety Data Sheets (SDS).

j. Maintain a weekly list of high hazard activities involving energy, equipment, excavation, entry into confined space, and elevation, and be prepared to discuss details during QC Meetings.

k. Provide and keep a record of Site safety orientation and indoctrination for Contractor employees, subcontractor employees, and Site visitors.

Superintendent, QC Manager, and Safety Officer are subject to dismissal if the above duties are not being effectively carried out. If Superintendent, QC Manager, or Safety Officer are dismissed, Project Work will be stopped and will not be allowed to resume until a suitable replacement is approved and the above duties are again being effectively carried out.

1.8.3 Meetings

1.8.3.1 Preconstruction Conference

a. Contractor representatives who have a responsibility or significant role in accident prevention on the Project must attend the preconstruction conference. This includes the Project superintendent, Site Safety and Occupational Health officer, quality control manager, or any other assigned safety and health professionals who participated in the development of the APP (including the Activity Hazard Analyses (AHAs) and special plans, program and procedures associated with it).

b. Discuss the details of the submitted APP to include incorporated plans, programs, procedures and a listing of anticipated AHAs that will be developed and implemented during the performance of the Contract. This list of proposed AHAs will be reviewed at the conference and an agreement will be reached between the Contractor and the Contracting Officer as to which phases will require an analysis. In addition, establish a schedule for the preparation, submittal, and Government review of AHAs to preclude Project delays.

c. Deficiencies in the submitted APP, identified during the Contracting Officer's review, must be corrected, and the APP re-submitted for review prior to the start of construction. Work is not permitted to begin until an APP is established that is acceptable to the Contracting Officer.

1.8.3.2 Initial Meeting

The Contractor shall hold an on-site safety meeting with all employees prior to the Start of Work in order to identify hazards, issue PPE, and discuss safe work practices.

1.8.3.3 Daily Health and Safety Meetings

The Contractor shall conduct a daily Health and Safety Meeting, prior to beginning Work for that day, to address Health and Safety issues, changing Site conditions, activities and personnel. All Contractor and subcontractor employees working on the Site on that day shall attend the meeting. All meetings shall be documented and attendees shall sign acknowledgement of their presence at the meeting. Daily meetings shall include an evaluation of the Work to be conducted, the hazards associated with the Work, and control measures being used to reduce exposure.

Contractor and subcontractor personnel who are not in attendance for the daily Health and Safety meeting shall be briefed on the meeting notes upon

arrival at the Site and prior to commencing their Work activities. Employees shall sign acknowledgement of briefings prior to commencing Work.

The Contractor shall hold and document additional safety meetings at the start of each major task and whenever Site conditions affecting personnel safety change.

The Contractor shall inform the Contracting Officer of the time and place of all Daily Health and Safety meetings at least 24 hours in advance.

1.8.3.4 Periodic Safety Meetings

Conduct safety meetings to review past activities, plan for new or changed operations, review pertinent aspects of appropriate AHA (by trade), establish safe working procedures for anticipated hazards, and provide pertinent Safety and Occupational Health (SOH) training and motivation. Periodic safety meetings shall be scheduled and conducted at least twice per month until the conclusion of Work. All employees and subcontractors shall be required to attend. Document meeting minutes to include the date, persons in attendance, subjects discussed, and names of individual(s) who conducted the meeting. Maintain documentation on-site and furnish copies to the Contracting Officer on request.

Notify the Contracting Officer of all scheduled Periodic Safety Meetings 7 calendar days in advance.

1.9 ACCIDENT PREVENTION PLAN (APP)

A qualified person must prepare the written Site-specific APP. Prepare the APP in accordance with the requirements of 29 CFR 1910 and 29 CFR 1926, and as supplemented herein. Cover all paragraph and subparagraph elements in 29 CFR 1910 and 29 CFR 1926 applicable to the Work. The APP must be job-specific and address any unusual or unique aspects of the Project or activity for which it is written. The APP must interface with the Contractor's overall safety and health program referenced in the APP in the applicable APP element, and made Site-specific. Describe the methods to evaluate past safety performance of potential subcontractors in the selection process. Also, describe innovative methods used to ensure and monitor safe work practices of subcontractors. The Government considers the Prime Contractor to be the "controlling authority" for all Work Site safety and health of the subcontractors. Contractors are responsible for informing their subcontractors of the safety provisions under the terms of the Contract and the penalties for noncompliance, coordinating the Work to prevent one craft from interfering with or creating hazardous working conditions for other crafts, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out. The APP must be signed by an officer of the firm (Prime Contractor senior person), the individual preparing the APP, the on-site superintendent, the designated Safety Officer, the Contractor Quality Control Manager, and any designated Certified Safety Professional (CSP) or Certified Health Physicist (CIH). The Safety Officer must provide and maintain the APP and a log of signatures by each subcontractor foreman, attesting that they have read and understand the APP, and make the APP and log available on-site to the Contracting Officer. If English is not the foreman's primary language, the Prime Contractor must provide an interpreter.

Submit the APP to the Contracting Officer within 30 calendar days of Contract Award and not less than 10 calendar days prior to the date of the preconstruction conference for acceptance. Work cannot proceed without

an accepted APP. Once reviewed and accepted by the Contracting Officer, the APP and attachments will be enforced as part of the Contract. Disregarding the provisions of this Contract or the accepted APP is cause for stopping of Work, at the discretion of the Contracting Officer, until the matter has been rectified. Continuously review and amend the APP, as necessary, throughout the life of the Contract. Changes to the accepted APP must be made with the knowledge and concurrence of the Contracting Officer, Project superintendent, Safety Officer and Quality Control Manager. Incorporate unusual or high-hazard activities not identified in the original APP as they are discovered. Should any severe hazard exposure (e.g., imminent danger) become evident, stop work in the area, secure the area, and develop a plan to remove the exposure and control the hazard. Notify the Contracting Officer within 24 hours of discovery. Eliminate and remove the hazard. In the interim, take all necessary action to restore and maintain safe working conditions in order to safeguard on-site personnel, visitors, the public (as defined by ASSP A10.34), and the environment.

1.9.1 Names and Qualifications

Provide plans in accordance with the requirements of 29 CFR 1910 and 29 CFR 1926, including the following:

a. Names and qualifications (resumes including education, training, experience and certifications) of Site safety and health personnel designated to perform Work on this Project to include the designated Safety Officer and other competent and qualified personnel to be used. Specify the duties of each position.

b. Qualifications of competent and of qualified persons. As a minimum, designate and submit qualifications of competent persons for each of the following major areas: excavation; scaffolding; fall protection; hazardous energy; confined space; health hazard recognition, evaluation and control of chemical, physical and biological agents; and personal protective equipment and clothing to include selection, use and maintenance.

1.9.2 Plans

Provide plans in the APP in accordance with the requirements of 29 CFR 1910 and 29 CFR 1926, including the following:

1.9.2.1 Standard Lift Plan (SLP)

Plan lifts to avoid situations where the operator cannot maintain safe control of the lift. Prepare a written SLP in accordance with 29 CFR 1910 and 29 CFR 1926 for every lift or series of lifts (if duty cycle or routine lifts are being performed). The SLP must be developed, reviewed and accepted by all personnel involved in the lift in conjunction with the associated AHA. Signature on the AHA constitutes acceptance of the plan. Maintain the SLP on the LHE for the current lift(s) being made. Maintain historical SLPs for a minimum of 3 months.

1.9.2.2 Critical Lift Plan- Crane or Load Handling Equipment

Provide a Critical Lift Plan in accordance with 29 CFR 1910 and 29 CFR 1926. In addition, Critical Lift Plans are required for the following:

a. Lifts over 50 percent of the capacity of barge mounted mobile crane's

hoist.

b. When working around energized power lines where the Work will be closer than the minimum clearance distances of 29 CFR 1926, Subpart CC.

c. For lifts with anticipated binding conditions.

d. When erecting cranes.

1.9.2.2.1 Critical Lift Plan Planning and Schedule

Critical lifts require detailed planning and additional or unusual safety precautions. Develop and submit a critical lift plan to the Contracting Officer 30 calendar days prior to critical lift. Comply with load testing requirements of 29 CFR 1926, Subpart CC.

1.9.2.2.2 Lifts of Personnel

Demonstrate compliance with the requirements of 29 CFR 1926, Subpart CC

1.9.2.3 Multi-Purpose Machines, Material Handling Equipment, and Construction Equipment Lift Plan

Multi-purpose machines, material handling equipment, and construction equipment used to lift loads that are suspended by rigging gear, require proof of authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment. Written approval from a qualified registered professional engineer, after a safety analysis is performed, is allowed in lieu of the OEM's approval. Demonstrate that the operator is properly trained and that the equipment is properly configured to make such lifts and is equipped with a load chart.

1.9.2.4 Fall Protection and Prevention (FP&P) Plan

The plan must comply with the requirements of 29 CFR 1926, Subpart M and ASSP Z359.2, be Site specific, and address all fall hazards in the work place and during different phases of construction. Address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 6 feet. A competent person or qualified person for fall protection must prepare and sign the plan documentation. Include fall protection and prevention systems, equipment and methods employed for every phase of Work, roles and responsibilities, assisted rescue, self-rescue and evacuation procedures, training requirements, and monitoring methods. Review and revise, as necessary, the Fall Protection and Prevention Plan documentation as conditions change, but at a minimum every six months, for lengthy Projects, reflecting any changes during the course of construction due to changes in personnel, equipment, systems or work habits. Keep and maintain the accepted Fall Protection and Prevention Plan documentation at the Project Site for the duration of the Project. Include the Fall Protection and Prevention Plan documentation in the Accident Prevention Plan (APP).

1.9.2.5 Rescue and Evacuation Plan

Provide a Rescue and Evacuation Plan in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, OSHA Directive CPL 2.100, ASSP Z359.2, and any other federal, state and local regulatory requirements, and include in the FP&P Plan and as part of the APP. Include a detailed discussion of the following: methods of rescue;

methods of self-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility.

1.9.2.6 Hazardous Energy Control Program (HECP)

Develop a HECP in accordance with 29 CFR 1910.147, 29 CFR 1910.333, 29 CFR 1915.89, ASSP Z244.1, and ASSP A10.44. Submit this HECP as part of the Accident Prevention Plan (APP). Conduct a preparatory meeting and inspection with all effected personnel to coordinate all HECP activities. Document this meeting and inspection, and provide report to Contracting Officer. Ensure that each employee is familiar with and complies with these procedures.

1.9.2.7 Excavation Plan

Identify the safety and health aspects of excavation, and provide and prepare the plan in accordance withapplicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, and Section 31 00 00 EARTHWORK.

1.9.2.8 Occupant Protection Plan

Identify the safety and health aspects of lead-based paint removal, prepared in accordance with Section 02 83 00 LEAD REMEDIATION.

1.9.2.9 Asbestos Hazard Abatement Plan

Identify the safety and health aspects of Asbestos Work, and prepare in accordance with Section02 82 00 ASBESTOS REMEDIATION.

1.9.2.10 Polychlorinated Biphenyls (PCB) Plan

Identify the safety and health aspects of Polychlorinated Biphenyls Work, and prepare in accordance with Section 02 61 23 REMOVAL AND DISPOSAL OF PCB CONTAMINATED SOILS.

1.9.2.11 Site Demolition Plan

Identify the safety and health aspects, and prepare in accordance with Section 02 41 00 DEMOLITION AND DECONSTRUCTION and referenced sources.

1.10 ACTIVITY HAZARD ANALYSIS (AHA)

Before beginning each activity, task or Definable Feature of Work (DFOW) involving a type of Work presenting hazards not experienced in previous Project operations, or where a new work crew or subcontractor is to perform the Work, the Contractor(s) performing that Work activity must prepare an AHA. AHAs must be developed by the Prime Contractor, subcontractor, or supplier performing the Work, and provided for Prime Contractor review and approval before submitting to the Contracting Officer. AHAs must be signed by the Safety Officer, Superintendent, Quality Control Manager and the subcontractor Foreman performing the Work. Format the AHA as directed by the Contracting Officer. Submit the AHA for review at least 15working days prior to the start of each activity task, or DFOW. The Government reserves the right to require the Contractor to revise and resubmit the AHA if it fails to effectively identify the Work sequences, specific anticipated hazards, Site conditions, equipment, materials, personnel and the control measures to be implemented.

AHAs must identify competent persons required for phases involving high risk activities, including confined entry, crane and rigging, excavations, .Electrical Work, fall protection, and scaffolding.

1.10.1 AHA Management

Review the AHA list periodically (at least monthly) at the Contractor supervisory safety meeting, and update as necessary when procedures, scheduling, or hazards change. Use the AHA during daily inspections by the Safety Officer to ensure the implementation and effectiveness of the required safety and health controls for that Work activity.

1.10.2 AHA Signature Log

Each employee performing Work as part of an activity, task or DFOW must review the AHA for that Work and sign a signature log specifically maintained for that AHA prior to starting Work on that activity. The Safety Officer must maintain a signature log on-site for every AHA. Provide employees whose primary language is other than English, with an interpreter to ensure a clear understanding of the AHA and its contents.

1.11 DISPLAY OF SAFETY INFORMATION

1.11.1 Safety Bulletin Board

Within 1 calendar day(s) after commencement of Work, conspicuously erect a safety bulletin board in an area that is readily accessible to all employees on the Project Site. Where size, duration, or logistics of Project do not facilitate a bulletin board, an alternative method, acceptable to the Contracting Officer, that is accessible and includes all mandatory information for employee and visitor review, may be deemed as meeting the requirement for a bulletin board. Include and maintain information on safety bulletin board as required by applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926 including but not limited to the following:

a. OSHA Job Safety & Health poster.

b. Local emergency medical, fire and rescue telephone numbers.

c. A map denoting the route to the nearest emergency care facility.

d. A copy of the most current Accident Prevention Plan.

e. The Occupational Safety and Health Administration (OSHA) Form 300A.

f. A copy of the Safety and Occupational Health (SOH) Deficiency Tracking log.

g. Date of last workday injury and date of last OSHA recordable injury.

h. A copy of the Hazard Communication (HAZCOM) Program.

Additional items required to be posted on or adjacent to the safety bulletin board include:

a. Any citation issued during an OSHA inspection of the Project Site.

b. Confined space entry permit.

c. Hot Work permit.

1.11.2 Safety and Occupational Health (SOH) Deficiency Tracking System

Establish a SOH deficiency tracking system that lists and monitors the status of SOH deficiencies in chronological order. Use the tracking system to evaluate the effectiveness of the APP. A monthly evaluation of the data must be discussed in the QC or SOH meeting with everyone on the Project. The list must be posted on the Project Bulletin Board and updated daily, and provide the following information:

a. Date deficiency identified;

b. Description of deficiency;

c. Name of person responsible for correcting deficiency;

d. Projected resolution date;

e. Date actually resolved.

1.11.3 Hazard Communication (HAZCOM) Program

The Contractor shall have a written hazard communication program complying with 29 CFR 1910.120 in order to communicate the health hazards associated with all chemicals used or stored at the Project Site.

1.11.3.1 Chemicals

All chemicals shall be labeled or have appropriate warnings affixed. An MSDS shall be maintained and readily available at the Project Site for all chemicals. All employees shall receive training on the hazards of associated chemicals, and in the information contained in a MSDS.

1.11.3.2 Physical Agents

PADS shall be maintained at the Work Sites as required by 8 AAC 61 Article 11. All employees shall receive training on the information contained in a PADS.

1.11.4 Warning Signs

Provide warning signs at the limits of construction stating that access is restricted to authorized personnel and PPE is required. Also provide warning signs to warn pedestrians and drivers to potentially dangerous areas.

1.12 SITE SAFETY REFERENCE MATERIALS

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

1.13 EMERGENCY MEDICAL TREATMENT

Sitka is a "911" response location. is a "911" response location.

Transportation and treatment are provided by community/commercial resources and are the responsibility of the Contractor. Government has no responsibility to provide emergency medical treatment.

Government has no responsibility to provide emergency medical treatment.

Emergency response procedures including but not limited to emergency contact information (Contracting Officer, Contractor, base fire and police, hospital, etc.), evacuation routes, route to nearest hospital, management, and reporting are to be presented in the Contractor's Plan.

1.14 NOTIFICATIONS and REPORTS

1.14.1 Mishap Notification

The Contractor shall immediately (within 30 minutes) verbally report to the Contracting Officer the occurrence of any Health and Safety incident. Unless specified otherwise, an Incident Report form or Near-Miss Report shall be submitted within 24 hours of occurrence of the incident or issue.

The Contractor shall immediately and fully investigate any such incident or near-miss and conduct a root cause analysis, and shall submit to the Contracting Officer, the Contractor's written corrective action plan.

In general, formally notify the Contracting Officer as soon as practical, but no more than twenty-four hours, after any mishaps, including recordable accidents, incidents, and near misses, as defined by OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, any report of injury, illness, or any property damage. For LHE or rigging mishaps, notify the Contracting Officer as soon as practical but not more than 4 hours after mishap. The Contractor is responsible for obtaining appropriate medical and emergency assistance and for notifying fire, law enforcement, and regulatory agencies. Immediate reporting is required for electrical mishaps, to include Arc Flash; shock; uncontrolled release of hazardous energy (includes electrical and non-electrical); load handling equipment or rigging; fall from height (any level other than same surface); and underwater diving. These mishaps must be investigated in depth to identify all causes and to recommend hazard control measures.

Within notification include Contractor name; Contract title; type of Contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; extent of injury, if known, and brief description of accident (for example, type of construction equipment used and PPE used). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and Government investigation is conducted. Assist and cooperate fully with the Government's investigation(s) of any mishap.

1.14.2 Accident Reports

a. Conduct an accident investigation for recordable injuries and illnesses, property damage, and near misses as defined by OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, to establish the root cause(s) of the accident. The Contracting Officer will provide copies of any required or special forms.

b. Near Misses: Report all "Near Misses" to the Contracting Officer, using standard reporting procedures, within 24 hrs. Near miss reports

are considered positive and proactive Contractor safety management actions.

c. Injury or Illness: Within 24 hours of the occurrence of an incident causing an occupational injury or illness, the Contractor shall complete and submit Alaska Department of Labor Form 07-6101, Report of Occupational Injury or Illness. Include a copy of any such submitted reports with the Contract Daily Report to the Contracting Officer.

d. Death or Hospitalization: If an incident involves a work-related fatality or hospitalization of three (3) or more employees, notify the nearest federal and state OSHA area offices by telephone within eight hours, and immediately inform the Contracting Officer.

e. Conduct an accident investigation for any load handling equipment accident (including rigging accidents) to establish the root cause(s) of the accident. Complete the LHE Accident Report (Crane and Rigging Accident Report) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Do not proceed with crane operations until cause is determined and corrective actions have been implemented to the satisfaction of the Contracting Officer.

1.14.3 Additional Reports and Notifications

The Contractor shall notify the Contracting Officer in writing at least 5 days prior to bringing any hazardous material, equipment, or process to the Site, or using the same on the Site.

The Contractor shall maintain on-site a Material Safety Data Sheet (MSDS) for all chemicals brought on to the Site.

The Contractor shall immediately notify the Contracting Officer in writing of any hazard that the Contractor discovers or observes on the Project Site and corrective measures planned or taken to eliminate or minimize such hazard.

1.14.3.1 LHE Inspection Reports

Submit LHE inspection reports required as specified herein with Daily Reports of Inspections.

1.14.3.2 Certificate of Compliance and Pre-lift Plan/Checklist for LHE and Rigging

Provide a Certificate of Compliance for LHE entering an activity under this Contract and in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926. Post certifications on the crane.

Develop a Standard Lift Plan (SLP) in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926 for each lift planned. Submit SLP to the Contracting Officer for approval within 15 calendar days in advance of planned lift.

1.14.3.3 Third Party Certification of Floating Cranes and Barge-Mounted Mobile Cranes

Certify floating cranes and barge-mounted mobile cranes in accordance with 29 CFR 1919 by an OSHA accredited person.

1.14.4 Violations

Failure to report, or discouraging employees to report occupational injuries or illnesses shall be construed as a blatant disregard for the requirements of this section and may constitute a default condition in the Contract as determined by the Contracting Officer. The Contracting Officer may require the Contractor to report any violation of occupational safety and health regulations to the appropriate federal and/or state agencies.

1.15 HOT WORK

1.15.1 Hot Work Permit

Submit and obtain a written permit prior to performing "Hot Work" (e.g., welding or cutting) or operating other flame-producing/spark producing devices, from the in accordance with established procedures at AIRSTA SITKA at least 72 hours in advance of commencing any Hot Work. A permit is also required from the Explosives Safety Office for Work in and around where explosives are processed, stored, or handled. These permits are issued on a daily or weekly basis, depending on the Work. Notify the Contracting Officer and Explosives Safety OfficeFire Division 24 hours in advance of performing any "Hot Work."

CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED. Provide at least two 20 pound 4A:20 BC rated extinguishers and dousing water for normal "Hot Work". The extinguishers must be current inspection tagged, and contain an approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity. The Fire Watch must be trained in accordance with NFPA 51B and remain on-site for a minimum of one hour after completion of the task or as specified on the Hot Work permit.

When starting Work in the facility, require personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Explosives Safety OfficeFire Division phone number. REPORT ANY FIRE, NO MATTER HOW SMALL, TO THE RESPONSIBLE FIRE DIVISION IMMEDIATELY.

1.15.2 Welding

For arc welding provide protective clothing to conceal all skin on the front half of the body and provide eye protection from radiation with a #10 shade or darker. Arc welding shall not be performed when the worker's clothing is wet or the worker is standing in water. Ensure other workers are not exposed to ultraviolet radiation, with particular attention given to reflection off of surrounding surfaces.

1.15.3 Cutting

Provide eye protection from intense light with a #4 shade or darker. Keep all compressed gas cylinders in an upright position and ensure all cylinders not in use have protective caps installed. Fuel-gas cylinder valves shall not be opened more than 1½ turns. Never use acetylene in excess of 15 psig.

1.15.4 Fumes

Provide sufficient ventilation to remove all fumes from the breathing

zone, otherwise comply with the requirements for respiratory protection. Industrial coatings and paint shall be stripped back a minimum of four (4) inches from the point of Work.

1.15.5 Work Around Flammable Materials

Perform all Work in a fire-safe manner. Provide and maintain adequate firefighting equipment during the entire construction period.

Obtain permit approval from a NFPA Certified Marine Chemist for "HOT WORK" within or around flammable materials (such as fuel systems or welding/cutting on fuel pipes) or confined spaces (such as sewer wet wells, manholes, or vaults) that have the potential for flammable or explosive atmospheres.

Whenever these materials, except beryllium and chromium (VI), are encountered in indoor operations, local mechanical exhaust ventilation systems that are sufficient to reduce and maintain personal exposures to within acceptable limits must be used and maintained in accordance with manufacturer's instructions.

Flammable paints, oil, varnishes, etc., stored inside structures must be in a metal storage cabinet. When stored outside, flammables must be in a controlled area. Flammables being used outside of these areas are limited to a one day supply.

Temporary wiring must be in compliance with Article 305 of the National Electric Code.

1.16 HIGH NOISE LEVEL PROTECTION

Schedule operations that involve the use of equipment with output of high noise levels (e.g., jackhammers, air compressors, and explosive-actuated devices) for after duty working hours during the hours designated by AIRSTA SITKA project coordinator. at the Pre-Construction Conference.. Use of any such equipment must be approved in writing by the Contracting Officer prior to commencement of Work.

1.17 SEVERE STORM PLAN

The Safety Officer shall monitor local media resources to identify possible severe weather conditions at the Project Site. Site Work may be delayed, postponed, or cancelled due to severe weather based on the Safety Officer discretion.

The Contractor shall perform cold exposure monitoring activities as required by weather conditions. All employees must learn to recognize signs of hypothermia and other weather symptoms, and the appropriate responses.

In the event of a severe storm warning, the Contractor must:

a. Secure outside equipment and materials and place materials that could be damaged in protected areas.

b. Check surrounding area, including roof, for loose material, equipment, debris, and other objects that could be blown away or against existing facilities.

c. Ensure that temporary erosion controls are adequate.

PART 2 PRODUCTS

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

Occupational safety and health of employees is a primary concern of the Government during performance of this Work. Any employee of the Contractor, or employee of a subcontractor hired by the Contractor, who shows willful negligence or a blatant disregard for the requirements of this section shall be subject to immediate dismissal from Government property by the Contracting Officer. Continual or serious violations of the requirements of this section may constitute a default condition in the Contract as determined by the Contracting Officer.

Comply with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926; NFPA standards NFPA 70, NFPA 70E, NFPA 241; and the APP, the AHA, Federal and State regulations, and other related submittals and activity fire and safety regulations. The most stringent standard prevails.

Make provisions prior to the Start of Work for prompt medical attention in case of a serious injury on the Project Site. The Contractor shall maintain adequate first aid supplies in a readily accessible location. The Contractor shall have a means by which to immediately contact local emergency medical personnel.

PPE is governed in all areas by the nature of the Work the employee is performing. Use personal hearing protection at all times in designated noise hazardous areas or when performing noise hazardous tasks. Safety glasses must be worn or carried/available on each person. Other mandatory PPE includes:

a. Hard Hat

b. Long Pants

c. Appropriate Safety Shoes

d. Appropriate Class Reflective Vests

See EQUIPMENT article below for additional requirements.

3.1.1 Extreme Temperatures

Do not subject workers to an ambient temperature of 120 F or higher nor to an equivalent wind chill temperature of - 25 F or lower.

3.1.2 Illumination

Provide a minimum of five (5) foot-candles of illumination for all construction areas where Work is being performed.

3.1.3 Sanitation

Maintain a clean and well maintained Project Site at all time. Rubbish and debris shall be collected and put in appropriate receptacles on a daily

basis. Trash receptacles shall be removed from the Project Site and dumped at least once every week.

Provide a sufficient number of toilet facilities for the Project Site. Potable water shall be readily accessible to all employees. Adequate washing facilities shall be provided if any worker is involved with the use, transportation or handling of chemicals.

3.1.4 Worksite Communication

Employees working alone in a remote location or away from other workers must be provided an effective means of emergency communications (e.g., cellular phone, two-way radios, land-line telephones or other acceptable means). The selected communication must be readily available (easily within the immediate reach) of the employee and must be tested prior to the Start of Work to verify that it effectively operates in the area/environment. An employee check-in/check-out communication procedure must be developed to ensure employee safety.

3.1.5 Fire Prevention and Protection

Perform all Work in a fire-safe manner. Provide and maintain adequate firefighting equipment during the entire construction period.

Comply with local fire protection ordinances and regulations as required by the authority having jurisdiction. In many cases, the authority having jurisdiction may be the U.S. Coast Guard facility. The Contractor shall have a means by which to immediately contact the local fire/rescue department.

Where the regulations do not apply, comply with the standards of the National Fire Protection Association.

On-site burning of waste is strictly prohibited.

3.1.5.1 Extinguishers

Provide and maintain an adequate number of portable fire extinguishers during the construction period. The Contractor shall provide training in the use of fire extinguishers to all personnel required or permitted to use them.

3.1.5.2 Clear Access

Do not store materials or equipment in a manner that will block access by fire response vehicles nor block access to hydrants.

3.1.6 Storage

Comply with the requirements of Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS.

All unused materials and equipment shall be stored in the designated Contractor storage area. Materials may only be removed from the storage area and laid out 24 hours in advance prior to their incorporation into the Work.

3.1.6.1 Stacks

Limit the height of all material stacks to 10 feet. Allow at least 15 feet between stacks of material.

3.1.6.2 Winds

Tie-down or otherwise secure stored materials against high winds.

3.1.6.3 Liquids

All solvents, petroleum products, flammable and combustible liquids shall be stored in vapor tight containers.

3.1.7 Hazardous Materials

Each hazardous material must receive approval from the Contracting Officer or their designated representative prior to being brought onto the Project Site or prior to any other use in connection with this Contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

Ensure all hazardous materials kept on-site have proper labels or placards in accordance with 49 CFR 172. Waste materials must be properly marked, and any materials that require on-site storage must have proper warning labels.

Management of the Work shall be done in accordance with and in a manner consistent with knowledge of Project Site conditions, and will be protective of human health and the environment.

When handling contaminated materials, workers must comply with the Contractor's Accident Prevention Plan and wear appropriate PPE.

3.1.7.1 Remediation

The Contractor shall perform all Work in accordance with federal, state, and local regulations and the construction documents for working with and around regulated materials including but not limited to lead based paints and asbestos containing materials. All Work Sites shall be secured/protected during abatement.

3.1.7.2 Disposal

Dispose of asbestos containing material in accordance with federal, state and local regulations. Recycle lead based paint materials. Dispose of HAZMAT in accordance with Environmental Specifications.

3.1.8 Hazardous Material Use

Each hazardous material must receive approval from the Contracting Officer or their designated representative prior to being brought onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material.

3.1.9 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this Contract,

radioactive materials or instruments capable of producing ionizing/non-ionizing radiation (with the exception of radioactive material and devices used in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926.53 and 29 CFR 1926.54. such as nuclear density meters for compaction testing and laboratory equipment with radioactive sources) as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint, and hexavalent chromium, are prohibited. The Contracting Officer, upon written request by the Contractor, may consider exceptions to the use of any of the above excluded materials. Low mercury lamps used within fluorescent lighting fixtures are allowed as an exception without further Contracting Officer approval.

3.1.10 Unforeseen Hazardous or Contaminated Material

Contract documents identify materials such as PCB, lead paint, and friable and non-friable asbestos and other OSHA regulated chemicals (e.g., 29 CFR Part 1910.1000). If material(s) that may be hazardous to human health upon disturbance are encountered during construction operations, stop that portion of Work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the Work, the Government will issue a modification pursuant to FAR 52.243-4 Changes and FAR 52.236-2 Differing Site Conditions.

Hazardous or contaminated materials (if encountered) will be handled of according to all local, state, and federal laws, and the Contract requirements.

3.2 UTILITY OUTAGE REQUIREMENTS

Submit requests for utility outages to the Contracting Officer in accordance with Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS. Where outages involve Government or Utility personnel, coordinate with the Government on all activities involving the control of hazardous energy.

These activities include, but are not limited to, a review of HECP and HEC procedures, as well as applicable Activity Hazard Analyses (AHAs). In accordance with 29 CFR 1926, Subpart K and NFPA 70E, Work on energized electrical circuits must not be performed without prior Government authorization. Government permission is considered through the permit process and submission of a detailed AHA. Energized Work permits are considered only when de-energizing introduces additional or increased hazard or when de-energizing is infeasible.

3.3 OUTAGE COORDINATION MEETING

After the utility outage request is approved and prior to beginning Work on the utility system requiring shut-down, conduct a pre-outage coordination meeting. This meeting must include the Prime Contractor, the Prime and subcontractors performing the Work, the Contracting Officer, and the Installation representativeFacility Partners. All parties must fully coordinate HEC activities with one another. During the coordination meeting, all parties must discuss and coordinate on the Scope of Work, HEC procedures (specifically, the lock-out/tag-out procedures for worker and

utility protection), the AHA, assurance of trade personnel qualifications, identification of competent persons, and compliance with HECP training in accordance withrequirements of the applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart K.. Clarify when personal protective equipment is required during switching operations, inspection, and verification.

3.4 CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT)

Provide and operate a Hazardous Energy Control Program (HECP) in accordance with 29 CFR 1910.333, 29 CFR 1915.89, ASSP A10.44, NFPA 70E, and paragraph HAZARDOUS ENERGY CONTROL PROGRAM (HECP).

3.4.1 Safety Preparatory Inspection Coordination Meeting with the Government or Utility

For electrical distribution equipment that is to be operated by Government or Utility personnel, the Prime Contractor and the subcontractor performing the Work must attend the safety preparatory inspection coordination meeting, which will also be attended by the Contracting Officer. The meeting will occur immediately preceding the start of Work and following the completion of the outage coordination meeting. Both the safety preparatory inspection coordination meeting and the outage coordination meeting must occur prior to conducting the outage and commencing with lockout/tagout procedures.

3.4.2 Lockout/Tagout Isolation

Where the Government or Utility performs equipment isolation and lockout/tagout, the Contractor must place their own locks and tags on each energy-isolating device and proceed in accordance with the HECP. Before any Work begins, both the Contractor and the Government or Utility must perform energy isolation verification testing while wearing required PPE detailed in the Contractor's AHA. Install personal protective grounds, with tags, to eliminate the potential for induced voltage in accordance with the requirements of applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart K.

3.4.3 Lockout/Tagout Removal

Upon completion of Work, conduct lockout/tagout removal procedure in accordance with the HECP. Each lock and tag must be removed from each energy isolating device by the authorized individual or systems operator who applied the device. Provide formal notification to the Government (by completing the Government form if provided by Contracting Officer), confirming that steps of de-energization and lockout/tagout removal procedure have been conducted and certified through inspection and verification. Government or Utility locks and tags used to support the Contractor's Work will not be removed until the authorized Government employee receives the formal notification.

3.5 FALL PROTECTION PROGRAM

Where a worker may fall from a working elevation to a lower elevation greater than a distance of 6 feet or when a worker must climb to a height of more than 24 feet, fall protection shall be provided by guardrails, belt restraint systems, or safety nets.

Establish a fall protection program, for the protection of all employees

exposed to fall hazards. Within the program include company policy, identify roles and responsibilities, education and training requirements, fall hazard identification, prevention and control measures, inspection, storage, care and maintenance of fall protection equipment and rescue and evacuation procedures in accordance with ASSP Z359.2 and applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926.

3.5.1 Training

Institute a fall protection training program. As part of the Fall Protection Program, provide training for each employee who might be exposed to fall hazards and using personal fall protection equipment.

Provide training by a competent person for fall protection in accordance with 29 CFR 1926.503. Document training and practical application of the competent person in accordance with 29 CFR 1926, Subpart M and ASSP Z359.2 in the AHA.

3.5.2 Fall Protection Equipment and Systems

Enforce use of personal fall protection equipment and systems designated (to include fall arrest, restraint, and positioning) for each specific Work activity in the Site Specific Fall Protection and Prevention Plan and AHA at all times when an employee is exposed to a fall hazard. Protect employees from fall hazards as specified in 29 CFR 1926, Subpart M.

Provide personal fall protection equipment, systems, subsystems, and components that comply with 29 CFR 1926, Subpart M, ASSP Z359.0, ASSP Z359.1, ASSP Z359.2, ASSP Z359.3, ASSP Z359.4, ASSP Z359.6, ASSP Z359.7, ASSP Z359.11, ASSP Z359.12, ASSP Z359.13, ASSP Z359.14, and ASSP Z359.15.

3.5.2.1 Additional Personal Fall Protection Measures

In addition to the required fall protection systems, other protective measures such as safety skiffs, personal floatation devices, and life rings, are required when working above or next to water in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart M. Personal fall protection systems and equipment are required when working from an articulating or extendible boom, swing stages, or suspended platform. In addition, personal fall protection systems are required when operating other equipment such as scissor lifts. The need for tying-off in such equipment is to prevent ejection of the employee from the equipment during raising, lowering, travel, or while performing Work.

3.5.2.2 Personal Fall Protection Equipment

Only a full-body harness with a shock-absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest body support device. The use of body belts is not acceptable. Harnesses must have a fall arrest attachment affixed to the body support (usually a Dorsal D-ring) and specifically designated for attachment to the rest of the system. Snap hooks and carabineers must be self-closing and self-locking, capable of being opened only by at least two consecutive deliberate actions and have a minimum gate strength of 3,600 lbs in all directions. Use webbing, straps, and ropes made of synthetic fiber. The maximum free fall distance when using fall arrest equipment must not exceed 6 feet, unless the proper energy absorbing lanyard is used. Always take into consideration the

total fall distance and any swinging of the worker (pendulum-like motion), that can occur during a fall, when attaching a person to a fall arrest system. All full body harnesses must be equipped with Suspension Trauma Preventers such as stirrups, relief steps, or similar in order to provide short-term relief from the effects of orthostatic intolerance.

3.5.3 Fall Protection for Roofing Work

Fall protection shall be employed for all Work on roofs with unprotected edges. Implement fall protection controls based on the type of roof being constructed and Work being performed. Evaluate the roof area to be accessed for its structural integrity including weight-bearing capabilities for the Projected loading.

a. Low Sloped Roofs:

(1) For Work within 6 feet from unprotected edge of a roof having a slope less than or equal to 4:12 (vertical to horizontal), protect personnel from falling by the use of conventional fall protection systems (personal fall arrest/restraint systems, guardrails, or safety nets) in accordance with Section 21 and 29 CFR 1926.500. A safety monitoring system is not adequate fall protection and is not authorized.

(2) For Work greater than 6 feet from the unprotected roof edge, in addition to the use of conventional fall protection systems, the use of a warning line system is also permitted in accordance with 29 CFR 1926.500.

b. Steep-Sloped Roofs: Steep-sloped roofs are defined as any roof having a slope greater than 4:12 (vertical to horizontal). Roof jacks shall be utilized but shall not substitute for fall protection for all work on steep-sloped roofs. Work on steep-sloped roofs requires a personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also applies to residential or housing type construction.

3.5.4 Horizontal Lifelines (HLL)

Provide HLL in accordance with 29 CFR 1926, Subpart M. Commercially manufactured horizontal lifelines (HLL) must be designed, installed, certified and used, under the supervision of a qualified person, for fall protection as part of a complete fall arrest system which maintains a safety factor of 2 (29 CFR 1926.500). The competent person for fall protection may (if deemed appropriate by the qualified person) supervise the assembly, disassembly, use and inspection of the HLL system under the direction of the qualified person. Locally manufactured HLLs are not acceptable unless they are custom designed for limited or Site specific applications by a Registered Professional Engineer who is qualified in designing HLL systems.

3.5.5 Guardrails and Safety Nets

Design, install and use guardrails and safety nets in accordance with 29 CFR 1926, Subpart M.

At a minimum, guardrail systems shall be installed at a height of forty-two (42) inches above the top of the work surface, include toe-boards, and be designed and installed as required to restrain a force of 200 pounds.

3.5.6 Rescue and Evacuation Plan and Procedures

When personal fall arrest systems are used, ensure that the mishap victim can self-rescue or can be rescued promptly should a fall occur. Prepare a Rescue and Evacuation Plan and include a detailed discussion of the following: methods of rescue; methods of self-rescue or assisted-rescue; equipment used; training requirement; specialized training for the rescuers; procedures for requesting rescue and medical assistance; and transportation routes to a medical facility. Include the Rescue and Evacuation Plan within the Activity Hazard Analysis (AHA) for the phase of Work, in the Fall Protection and Prevention (FP&P) Plan, and the Accident Prevention Plan (APP). The plan must comply with the requirements of applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart M; ASSP Z359.2, and ASSP Z359.4.

3.6 WORK PLATFORMS

Working platforms shall be fully planked with toeboards installed. All planking shall be at least nominal 2x12 Scaffold Grade lumber. Planking shall be secured against slippage off of supports. Overlapped planks shall be laid to have a minimum 12-inch bearing on each end.

3.6.1 Scaffolding

Provide employees with a safe means of access to the Work Area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Comply with the following requirements:

a. No Work shall be done from a scaffold that is wet or icy or during inclement weather. Scaffolds shall not be moved with workers on them.

b. Scaffold platforms greater than 20 feet in height must be accessed by use of a scaffold stair system.

c. Ladders commonly provided by scaffold system manufacturers are prohibited for accessing scaffold platforms greater than 20 feet maximum in height.

d. An adequate gate is required.

e. Employees performing scaffold erection and dismantling must be qualified.

f. Scaffold must be capable of supporting their own weight plus at least four times the maximum intended load, and provide appropriate fall protection as delineated in the accepted fall protection and prevention plan.

g. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward.

h. Special care must be given to ensure scaffold systems are not overloaded.

i. Side brackets used to extend scaffold platforms on self-supported scaffold systems for the storage of material are prohibited. The first tie-in must be at the height equal to 4 times the width of the

smallest dimension of the scaffold base. Scaffolds more than four times higher than the least dimension of the base shall be prevented from tipping by guying, tying, or bracing.

j. Scaffolding other than suspended types must bear on base plates upon wood mudsills (2 in x 10 in x 8 in minimum) or other adequate firm foundation.

k. Scaffold or work platform erectors must have fall protection during the erection and dismantling of scaffolding or work platforms that are more than 6 feet.

l. Delineate fall protection requirements when working above 6 feet or above dangerous operations in the Fall Protection and Prevention (FP&P) Plan and Activity Hazard Analysis (AHA) for the phase of Work.

m. Ladder jack scaffolds shall not exceed 20 feet in height. Pump jack scaffolds shall have two positive gripping mechanisms on each bracket.

Lean-to scaffolds are prohibited.

3.6.2 Elevated Aerial Work Platforms (AWPs)

Workers must be anchored to the basket or bucket in accordance with Manufacturer's Specifications and instructions (anchoring to the boom may only be used when allowed by the manufacturer and permitted by the CP). Lanyards used must be sufficiently short to prohibit worker from climbing out of basket. The climbing of rails is prohibited. Lanyards with built-in shock absorbers are acceptable. Self-retracting devices are not acceptable. Tying off to an adjacent pole or structure is not permitted unless a safe device for 100 percent tie-off is used for the transfer.

Use of AWPs must be operated, inspected, and maintained as specified in the operating manual for the equipment and delineated in the AHA. Operators of AWPs must be designated as qualified operators by the Prime Contractor. Maintain proof of qualifications on-site for review and include in the AHA.

3.7 EQUIPMENT

The Contractor shall furnish and maintain materials and equipment for the Health and Safety of the Contractor employees, its subcontractors, Suppliers, and visitor personnel. The Contractor shall provide all required Health and Safety equipment, first aid equipment, tools, monitoring equipment, PPE, and ancillary equipment and methods required to ensure workers' Health and Safety and to comply with the Contractor's Accident Prevention Plan.

3.7.1 PPE

The Contractor shall be responsible for providing and maintaining all required personal protective equipment for employees as required in applicable regulations and as indicated below. The Contractor shall also provide such PPE if requested by any worker.

The appropriate level of PPE shall be determined by the Contractor for specific tasks as described in the Contractor's Accident Prevention Plan. If hazards are identified that require a level of protection greater than

Level C, Work shall be suspended and the Contracting Officer notified. The Contractor's Accident Prevention Plan, in consultation with the Contracting Officer, shall determine what actions are required prior to restarting Work. The Contractor shall determine and document the appropriateness of suggested minimum PPE requirements for the Contractor's employees and others at the Project Site.

3.7.1.1 Minimum PPE Requirements

Level D protection will be required at all times while on-site by all personnel and visitors on the Site, except in Support Zone areas. Level D PPE consists of:

3.7.1.1.1 Hard Hats

A hard hat shall be worn by all workers and visitors in the immediate vicinity or involved with:

a. Work in the vicinity of overhead hazards

b. Demolition

c. Work on and access to roofs

d. High-voltage work

e. Heavy equipment operation

f. Work on and access to scaffolds or towers.

3.7.1.1.2 Eye Protection

Safety glasses with permanent side shield sor goggles shall be worn by all workers and visitors in the immediate vicinity or involved with:

a. Demolition

b. Hot Work

c. Use of compressed air

d. Spraying operations

e. Use of impact or high-speed rotary tools and equipment

3.7.1.1.3 Hearing Protection

Provide hearing protection to all workers and visitors exposed to a noise level in excess of 84 dba. Provide double hearing protection to all workers and visitors exposed to a noise level in excess of 120 dba.

3.7.1.1.4 Safety Vests

All workers and visitors shall wear high visibility orange reflective safety vests. All exterior workers at night and all flaggers or persons directing traffic shall wear a red and orange safety vest with reflective material.

3.7.1.1.5 Attire

Proper work attire shall be worn by all workers and visitors. Proper work attire includes:

a. Steel-toed boots

b. Work clothes (long pants, shirts with sleeves)

c. Work gloves

3.7.1.2 Level C PPE

If additional protection consisting of Level C PPE is required during the Work, Level C PPE shall include protection from dust particulates, and consist of Level D protection with the following additions:

3.7.1.2.1 Respirators

Respiratory protection shall be worn by all workers exposed to air contaminants in excess of the levels established in Table Z-1-A of 8 AAC 61 Article 11. Air contaminants include dust, smoke, fumes, gases, vapors and carcinogens.

Air-purifying respirators, half-face or full-face (depending on required protection factor), with cartridges meeting NIOSH/Mine Safety and Health Administration Specifications, may be used if:

a. The identity and concentration of the contaminant are known.

b. The respirator is approved for the contaminant and concentration.

c. The oxygen content of the atmosphere is not less than 19.5%.

d. There is periodic air monitoring of the atmosphere.

e. The respirator has been successfully fit tested on the user.

Otherwise, a positive pressure air-supplying respirator or self-contained breathing device shall be used.

All respirators shall be jointly approved by NIOSH.

3.7.1.2.2 Attire

The following are minimum additional Level C PPE attire requirements:

a. Disposable poly-coated chemically protective coveralls

b. Disposable chemically resistant outer gloves (nitrile)

c. Disposable chemically resistant inner gloves (nitrile)

d. Chemically resistant, steel-toed, and steel-shanked boots (PVC, neoprene, or nitrile), or outer booties.

3.7.2 Other Health and Safety Equipment

At a minimum, the Contractor is required to have the following equipment

available on the Site for the Health and Safety of Contractor, subcontractors, suppliers, and visitors:

a. First aid kits.

b. Fire suppression equipment (appropriate to location and type of flammable materials present). Equipment will be certified ready for use within the previous twelve months and will also have been inspected each month; documentation supporting certification and inspections will be available for review.

c. Flammable liquids storage cabinet(s), if necessary.

d. Fall protection equipment appropriate for the hazards on the Project Fall Protection. The Accident Prevention Plan shall specifically address, in detail, the fall protection and personal fall arrest system(s) to be employed. Required specifics include the type of fall protection and/or fall arrest systems and components to be employed; controlled access zones, if used; anchor points, if used, including their identification and any relevant calculations and/or equipment standards employed; employee training; rescue plans for personnel suspended in personal fall arrest equipment, if personal fall arrest equipment is employed; and medical assistance for suspension trauma, if personal fall arrest equipment is employed.

e. Heavy blankets.

f. Spill kits.

g. Emergency eyewash facilities meeting OSHA Specifications.

h. Personnel decontamination facilities and equipment.

i. Other equipment or supplies as determined to be necessary or prudent by the Contractor.

3.7.3 Machinery and Mechanized Equipment

a. Proof of qualifications for operator must be kept on the Project Site for review.

b. Manufacturer's specifications or owner's manual for the equipment must be on-site and reviewed for additional safety precautions or requirements that are sometimes not identified by OSHA. Incorporate such additional safety precautions or requirements into the AHAs.

c. All blades, buckets, rams etc. on hydraulic equipment shall be fully lowered to the ground when not in use.

d. All vehicles shall have an operable parking brake that is set when the vehicle is left unattended.

e. All vehicles used for earthwork, paving, landscaping or any driveable equipment used off-road shall be equipped with an audible back-up alarm.

f. All lifting equipment shall have the safe lifting capacity clearly posted on the equipment.

g. Before service or maintenance is performed on machinery or electrical equipment, the machinery or equipment must be turned off at a power distribution panel or disconnected from the energy source. The energy-isolating device must be rendered inoperative and tagged. This requirement shall also be applicable to work on piping systems and valves. Lockouts or tagouts shall only be removed by the person installing them.

3.7.3.1 Base Mounted Drum Hoists

a. Operation of base mounted drum hoists must comply with 29 CFR 1926.553 and ASSP A10.22.

b. Rigging gear must comply with applicable ASME/OSHA standards

c. When used on telecommunication towers, base mounted drum hoists must comply with TIA-1019, TIA-222, ASME B30.7, 29 CFR 1926.552, and 29 CFR 1926.553.

d. When used to hoist personnel, the AHA must include a written standard operating procedure. Operators must have a physical examination and be trained, at a minimum, in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926.553. The base mounted drum hoist must also comply with OSHA Instruction CPL 02-01-056 and ASME B30.23.

e. Material and personnel must not be hoisted simultaneously.

f. Personnel cage must be marked with the capacity (in number of persons) and load limit in pounds.

g. Construction equipment must not be used for hoisting material or personnel or with trolley/tag lines. Construction equipment may be used for towing and assisting with anchoring guy lines.

3.7.3.2 Material Handling Equipment (MHE)

a. Material handling equipment such as forklifts must not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions. Material handling equipment fitted with personnel work platform attachments are prohibited from traveling or positioning while personnel are working on the platform.

b. The use of hooks on equipment for lifting of material must be in accordance with manufacturer's printed instructions. Material Handling Equipment Operators must be trained in accordance with OSHA 29 CFR 1910, Subpart N.

c. Operators of forklifts or power industrial trucks must be licensed in accordance with OSHA.

3.7.3.3 Load Handling Equipment (LHE)

The following requirements apply. In exception, these requirements do not apply to commercial truck mounted and articulating boom cranes used solely to deliver material and supplies (not prefabricated components, structural steel, or components of a systems-engineered metal building) where the lift consists of moving materials and supplies from a truck or trailer to

the ground; to cranes installed on mechanics trucks that are used solely in the repair of shore-based equipment; to crane that enter the activity but are not used for lifting; nor to other machines not used to lift loads suspended by rigging equipment. However, LHE accidents occurring during such operations must be reported.

a. Equip cranes and derricks as specified in 29 CFR 1926, Subpart CC.

b. Notify the Contracting Officer 30 working days in advance of any LHE entering the activity, so that necessary quality assurance spot checks can be coordinated. Prior to cranes entering federal activities, a Crane Access Permit must be obtained from the Contracting Officer. A copy of the permitting process will be provided at the Preconstruction Conference. Contractor's operator must remain with the crane during the spot check. Rigging gear must comply with OSHA, ASME B30.9 Standards safety standards.

c. Comply with the LHE Manufacturer's Specifications and limitations for erection and operation of cranes and hoists used in support of the Work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

d. Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, ASME B30.8 for floating cranes and floating derricks, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices and ASME B30.26 for rigging hardware.

e. When operating in the vicinity of overhead transmission lines, operators and riggers must be alert to this special hazard and follow the requirements of 29 CFR 1926, Subpart CC, 29 CFR 1926, Subpart K, and ASME B30.5 or ASME B30.22 as applicable.

f. Do not use crane suspended personnel work platforms (baskets) unless the Contractor proves that using any other access to the Work location would provide a greater hazard to the workers or is impossible. Do not lift personnel with a line hoist or friction crane. Additionally, submit a specific AHA for this Work to the Contracting Officer. Ensure the activity and AHA are thoroughly reviewed by all involved personnel.

g. Inspect, maintain, and recharge portable fire extinguishers as specified in NFPA 10, Standard for Portable Fire Extinguishers.

h. All employees must keep clear of loads about to be lifted and of suspended loads, except for employees required to handle the load.

i. Use cribbing when performing lifts on outriggers.

j. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.

k. A physical barricade must be positioned to prevent personnel access where accessible areas of the LHE's rotating superstructure poses a risk of striking, pinching or crushing personnel.

l. Maintain inspection records in accordance with 29 CFR 1926, Subpart CC, including shift, monthly, and annual inspections, the signature of the

person performing the inspection, and the serial number or other identifier of the LHE that was inspected. Records must be available for review by the Contracting Officer.

m. Maintain written reports of operational and load testing in accordance with 29 CFR 1926, Subpart CC, listing the load test procedures used along with any repairs or alterations performed on the LHE. Reports must be available for review by the Contracting Officer.

n. Certify that all LHE operators have been trained in proper use of all safety devices (e.g., anti-two block devices).

o. Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. At wind speeds greater than 20 mph, the operator, rigger and lift supervisor must cease all crane operations, evaluate conditions and determine if the lift may proceed. Base the determination to proceed or not on wind calculations per the manufacturer and a reduction in LHE rated capacity if applicable. Include this maximum wind speed determination as part of the activity hazard analysis plan for that operation.

p. On mobile cranes, lifts where the load weight is greater than 90 percent of the equipment's capacity are prohibited.

3.7.4 Use of Explosives

The on-site storage of explosives or blasting agents is strictly prohibited.

Explosives must not be used or brought to the Project Site without prior written approval from the Contracting Officer. Such approval does not relieve the Contractor of responsibility for injury to persons or for damage to property due to blasting operations.

Storage of explosives, when permitted on Government property, must be only where directed and in approved storage facilities. These facilities must be kept locked at all times except for inspection, delivery, and withdrawal of explosives.

3.7.5 Equipment and Facilities

The Contractor shall provide all equipment, temporary facilities, and personnel required to perform activities on-site safely in accordance with Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS, all Laws and Regulations and standards, and with the Contractor's Accident Prevention Plan.

3.7.5.1 Engineering Controls

The Contractor shall, at a minimum, provide the following engineering controls to reduce the hazards of equipment operation and exposure to Project Site hazardous chemicals:

a. Back-up alarms for all trucks and moving equipment

b. Temporary fencing to control access

c. Barricades for worker and public safety

d. Additional lighting as needed

e. Others as determined to be necessary or prudent by the Contractor.

3.7.5.2 Ladders

Only manufactured and rated ladders shall be used by the Contractor. Any damaged ladder shall be immediately removed from service. Ladders in excess of 35 feet shall not be used.

Ladders shall not be heeled at an angle less than 75% from the vertical. Ladders shall extend at least three feet above a landing. No Work shall be done from a ladder that is wet or icy or during inclement weather.

3.8 EXCAVATIONS

Soil classification must be performed by a competent person in accordance with 29 CFR 1926.

3.8.1 Utility Locations

Provide a third party, independent, private utility locating company to positively identify underground utilities in the Work Area in addition to any station locating service and coordinated with the station utility department.

3.8.2 Utility Location Verification

Physically verify underground utility locations, including utility depth, by hand digging using wood or fiberglass handled tools when any adjacent construction Work is expected to come within 3 feet of the underground system.

3.8.3 Utilities Within and Under Concrete, Bituminous Asphalt, and Other Impervious Surfaces

Utilities located within and under concrete slabs or pier structures, bridges, parking areas, and the like, are extremely difficult to identify. Whenever Contract Work involves chipping, saw cutting, or core drilling through concrete, bituminous asphalt or other impervious surfaces, the existing utility location must be coordinated with station utility departments in addition to location and depth verification by a third party, independent, private locating company. The third party, independent, private locating company must locate utility depth by use of Ground Penetrating Radar (GPR), X-ray, bore scope, or ultrasound prior to the start of demolition and construction. Outages to isolate utility systems must be used in circumstances where utilities are unable to be positively identified. The use of historical drawings does not alleviate the Contractor from meeting this requirement.

3.9 ELECTRICAL

Perform Electrical Work in accordance with the requirements of applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart K..

3.9.1 Conduct of Electrical Work

Electrical Work is to be conducted in a de-energized state unless there is

no alternative method for accomplishing the Work. In those cases obtain an Energized Work Permit from the Contracting Officer. The Energized Work Permit application must be accompanied by the AHA and a summary of why the equipment/circuit needs to be worked energized. Underground electrical spaces must be certified safe for entry before entering to conduct Work. Cables that will be cut must be positively identified and de-energized prior to performing each cut. Attach temporary grounds in accordance with ASTM F855 and IEEE 1048. Perform all high voltage cable cutting remotely using hydraulic cutting tool. When racking in or live switching of circuit breakers, no additional person other than the switch operator is allowed in the space during the actual operation. Plan so that Work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method.

When working in energized substations, only qualified electrical workers are permitted to enter. When Work requires Work near energized circuits as defined by NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves and electrical arc flash protection for personnel as required by NFPA 70E. Insulating blankets, hearing protection, and switching suits may also be required, depending on the specific job and as delineated in the Contractor's AHA. Ensure that each employee is familiar with and complies with these procedures and 29 CFR 1910.147.

3.9.2 Qualifications

Electrical work must be performed by QP personnel with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on work being performed, and must be identified in the appropriate AHA. Journeyman/Apprentice ratio must be in accordance with State, Local requirements applicable to where work is being performed.

3.9.3 Arc Flash

Conduct a hazard analysis/arc flash hazard analysis whenever work on or near energized parts greater than 50 volts is necessary, in accordance with NFPA 70E.

All personnel entering the identified arc flash protection boundary must be QPs and properly trained in NFPA 70E requirements and procedures. Unless permitted by NFPA 70E, no Unqualified Person is permitted to approach nearer than the Limited Approach Boundary of energized conductors and circuit parts. Training must be administered by an electrically qualified source and documented.

3.9.4 Grounding

Ground electrical circuits, equipment and enclosures in accordance with NFPA 70 and IEEE C2 to provide a permanent, continuous and effective path to ground unless otherwise noted by 29 CFR 1926, Subpart K.

Check grounding circuits to ensure that the circuit between the ground and a grounded power conductor has a resistance low enough to permit sufficient current flow to allow the fuse or circuit breaker to interrupt the current.

3.9.5 Testing

Temporary electrical distribution systems and devices must be inspected, tested and found acceptable for Ground-Fault Circuit Interrupter (GFCI) protection, polarity, ground continuity, and ground resistance before initial use, before use after modification and at least monthly. Monthly inspections and tests must be maintained for each temporary electrical distribution system, and signed by the electrical CP or QP.

3.9.6 Power Tools

All cord-and-plug portable tools and equipment shall be grounded or double insulated and labeled with the appropriate UL seal. The Contractor shall use either ground fault circuit interrupters or an assured equipment grounding conductor program, as specified in 29 CFR 1926.404, for all power tools.

3.9.7 Extension Cords

All extension cords shall be the three-wire grounding type. Worn, frayed or cut electrical cords and cables shall not be spliced nor repaired, but instead shall be removed from service and replaced. The Contractor shall use either ground fault circuit interrupters or an assured equipment grounding conductor program, as specified in 29 CFR 1926.404, for all power tools.

3.9.8 Temporary Receptacles

Provide GFCI protection for all 120-volt, single phase temporary power receptacles. Receptacles shall be considered to be temporary, if they serve 120-volt (nominal) portable equipment used by the Contractor in performance of this Contract.

3.9.9 Overhead Lines

For all Work, keep a minimum of ten (10) feet away from overhead power lines, otherwise contact the local utility and have the power secured to such lines.

3.9.10 Wet Locations

Do not use electrical tools when working in wet areas, including boats, rafts, and construction floats, wet excavations, or when an energized tool can be dropped into water. Utilize pneumatic tools for these locations.

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS
11/21

PART 1 GENERAL

1.1 REFERENCES

Various publications are referenced in other sections of the Specifications to establish requirements for the Work. The reference publications form a part of this Specification to the extent referenced. These references are identified in each section by basic designation only within the text, and by document number, date and title in the REFERENCES article. The document number used in the citation is the number assigned by the standards producing organization (e.g., ASTM B564 Standard Specification for Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes. **Unless directed otherwise by the Contracting Officer, use the latest editions of all referenced publications in effect at the time of the Project Contract Award.**

1.2 ORDERING INFORMATION

The addresses of the standards publishing organizations whose documents are referenced in other sections of these specifications are listed below, and if the source of the publications is different from the address of the sponsoring organization, that information is also provided.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)
1801 Alexander Bell Drive
Reston, VA 20191
Ph: 800-548-2723; 703-295-6300
Internet: https://www.asce.org/

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Ph: 847-699-2929
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Ph: 303-794-7711 or 800-926-7337
Fax: 303-347-0804
Internet: https://www.awwa.org/

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1220 19th St NW, Suite 410
Washington, DC 20036
Ph: 202-737-0202
Fax: 202-315-0285
E-mail: info@aabc.com
Internet: https://www.aabc.com/

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

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)
USC Foundation Office
Research Annex 219
Los Angeles, CA 90089-7700
Ph: 866-545-6340
Fax: 213-740-8399
E-mail: fccchr@usc.edu
Internet: https://fccchr.usc.edu/

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
445 and 501 Hoes Lane
Piscataway, NJ 08854-4141
Ph: 732-981-0060 or 800-701-4333
Fax: 732-981-9667
E-mail: onlinesupport@ieee.org
Internet: https://www.ieee.org/

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

NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)
8575 Grovemont Circle
Gaithersburg, MD 20877
Ph: 301-977-3698
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Internet: https://www.nfpa.org

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Chantilly, VA 20151-1219
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Internet: http://www.legis.state.ak.us/basis/aac.asp

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Public Works
100 Lincoln Street
Sitka, AK 99835
Ph: 907-747-3294
Internet: http://www.cityofsitka.com

FEDERAL ACQUISITION REGULATIONS (FAR)
Internet: https://www.acquisition.gov/browsefar

RSMeans (RSM)
1099 Hingham St, Suite 201

Rockland, MA 20005
Ph: 800-448-8182
Internet: https://www.rsmeans.com/

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

Not used

-- End of Section --

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SECTION 01 45 00

QUALITY CONTROL
08/21

PART 1 GENERAL

1.1 WORK COVERED

Quality Control is the responsibility of the Contractor. Establish a method for monitoring the Work to ensure compliance with Contract requirements. Quality Control will be administered under Contract Clause FAR 52.246-12, Inspection of Construction. Provide a separate dedicated, full time, Quality Control Manager on-site dedicated to insuring conformance with the Contract requirements. The Quality Control Manager is defined by this section as the Contractor's Quality Control Manager. The Quality Control Manager must keep separate files on the Quality Assurance and Quality Control actions taken. These files should include internal non-compliance records, verification of material compliance with the approved submittals, verification of compliance with testing requirements, and remedial direction provided for non-compliant Work. These files must be made available to the Contracting Officer for review upon request. Failure to perform Quality Control will result in removal of the Quality Control Manager, and the Contractor must provide a replacement at no cost to the Government.

Submit your management system indicating the Quality Control Manager's reporting role that demonstrates the Quality Control Manager's performance reviews are separate from the specific Project profitability and schedule and are tied to corporate goals of safety and a quality product.

The objective is to guarantee performance of the Work to the required Contract standards for materials, workmanship, construction, finish, functional performance and identification. Quality control requirements apply to both on-site and off-site fabrication, all construction materials and operations, and specifically includes all required inspections, tests and submittals.

Note: For an activity to be considered one-hundred percent complete the required testing must be complete and the Work must fully comply with the Contract requirements.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM D3740	(2019) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E329	(2020) Standard Specification for Agencies Engaged in Construction Inspection,

	Testing, or Special Inspection

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.211-10	Commencement, Prosecution, and Completion of Work
FAR 52.246-12	Inspection of Construction

1.3 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program. Include all associated costs in the applicable Bid Schedule item.

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Contractor Quality Control Plan

SD-06 Test Reports

Verification Statement

SD-07 Certificates

Laboratory Accreditation And Validation

SD-11 Closeout Submittals

Field Testing Log

1.4.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

PART 2 PRODUCTS

A copy of all approved product submittals shall be kept and maintained on-site by the Contractor. Products delivered on-site shall be the same as those indicated on approved submittals. Submittals shall be made available to the Contracting Officer upon request.

Before incorporation into the Work, the Contractor shall inspect all products to ensure conformance with the requirements of the Contract Drawings and Specifications.

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

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

3.2 CONTRACTOR QUALITY CONTROL PLAN

The Quality Control Plan shall clearly define the intended method to maintain Quality Control during construction phases of this Contract. Indicate the prior experience of all key individuals responsible for Quality Control. Describe the intended flow of information and key check points that will provide the quality on this Project.

Submit at least 14 days prior to the Pre-Construction Conference, the Contractor Quality Control Plan proposed to implement the requirements FAR 52.246-12 Inspection of Construction. The Government will consider an interim plan for the first 30 days of operation. will be permitted to begin only after acceptance of the Quality Control Plan or acceptance of an interim plan applicable to the particular feature of Workto be started. Work outside of the accepted interim plan will not be permitted to begin until acceptance of a Quality Control Plan or another interim plan containing the additional Work.

3.2.1 Content of the Quality Control Plan

Include, as a minimum, the following to cover all construction-operations, both on-site and off-site, including Work by subcontractors fabricators, suppliers and purchasing agents:

a. A description of the Quality Control organization, including a chart showing lines of authority and acknowledgment that the Quality Control staff will implement the three phase control system for all aspects of the Work specified. Include a Quality Control Manager that reports to the Project Superintendent.

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

c. A copy of the letter to the Quality Control Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the Quality Control Manager, including authority to stop Workwhich is not in compliance with the Contract. Letters of direction to all other various Quality Control representatives outlining duties, authorities, and responsibilities will be issued by

the Quality Control Manager. Furnish copies of these letters to the Contracting Officer.

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

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

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

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

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of Work. A definable feature of Work is a task which is separate and distinct from other tasks, has separate control requirements, and is identified by different trades or disciplines, or it is Work by the same trade in a different environment. Although each section of the Specifications can generally be considered as a definable feature of Work, there are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting.

j. Coordinate scheduled Work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections. Where the applicable Code issue by the International Code Council (ICC) calls for inspections by the Building Official, the Contractor must include the inspections in the Quality Control Plan and must perform the inspections required by the applicable ICC. The Contractor must perform these inspections using independent qualified inspectors. Include the Special Inspection Plan requirements in the QC Plan.

3.2.2 Acceptance

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

3.2.3 Notification of Changes

After acceptance of the Quality Control Plan, notify the Contracting Officer in writing of any proposed change, including changes in the QC organization personnel, a minimum of seven calendar days prior to a proposed change. Proposed changes are subject to acceptance by the

Contracting Officer.

3.2.3.1 Requests for Variations

Variations are changes to Contractor's approved design or construction processes that do not affect compliance with meeting terms of the Contract or request for proposal. Complete the Request for Variations form and submit to the Contracting Officer. This form will be provided upon award. Provide a record of all variations to ensure the as-built documents are accurate.

3.2.3.2 Requests for Deviations

Deviations are requests for changes to the Contract terms that must be authorized by the Contracting Officer and a formal change order issued before they may be implemented. Complete the Request for Deviations form and submit to the Contracting Officer for review and approval. This form will be provided upon award. Provide a record of all deviations to ensure the as-built documents are accurate.

3.3 COORDINATION MEETING

After the before start of construction, and prior to acceptance by the Government of the Quality Control Plan, meet with the Contracting Officer via teleconferenceand discuss the Contractor's Quality Control system. Submit the Quality Control Plan a minimum of 7 calendar days prior to the Coordination Meeting. During the meeting, a mutual understanding of the system details must be developed, including the forms for recording the Quality Control operations,, control activities, testing, administration of the system for both on-site and off-site Work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting will be prepared by the Contractor, and shall be signed by both the Contractor and the Contracting Officer and will become a part of the Contract file. There can be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings or address deficiencies in the Quality Control system or procedures which can require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 Personnel Requirements

The Contractor shall utilize skilled labor applicable to the trade being performed. Ensure required qualifications or certifications are current and maintained.

The requirements for the Quality Control organization are a Project Manager, Superintendent, Safety Officer, Quality Control Manager, and sufficient number of additional qualified personnel to ensure safety and Contract compliance. The Safety Officer reports directly to a senior Project (or corporate) official independent from the Quality Control Manager. The Safety Officer will also serve as a member of the Quality Control Staff Personnel identified in the technical provisions as requiring specialized skills to assure the required Work is being performed properly will also be included as part of the Quality Control organization. The Contractor's Quality Control staff maintains a presence at the Site at all times during progress of the Work and have complete

authority and responsibility to take any action necessary to ensure Contract compliance. The Quality Control staff will be subject to acceptance by the Contracting Officer. Provide adequate office space, filing systems and other resources as necessary to maintain an effective and fully functional Quality Control organization. Promptly complete and furnish all letters, material submittals, Shop Drawing submittals, schedules and all other Project documentation to the Quality Control organization. The Quality Control organization is responsible to maintain these documents and records at the Site at all times, except as otherwise acceptable to the Contracting Officer.

The Government reserves the right to accept or reject any team member substitution after award of this Contract. Changes to the require Contracting Officer's approval.

3.4.2 Project Manager (PM)

3.4.3 Superintendent

The superintendent must have experience managing at least 5 prior Design-Bid-Build Projects of a similar size and complexity as this Project as a superintendent.

3.4.4 Quality Control Manager

Identify as Quality Control Manager an individual within the on-site Work organization that is responsible for overall management of Quality Control and has the authority to act in all Quality Control matters for the Contractor. The Quality Control Manager is required to be a construction person with a minimum of 10 years in related Work. This Quality Control Manager is on the Site at all times during construction and is employed by the prime Contractor. The Quality Control Manager is assigned no other duties and may not be the same person as the Superintendent or Project Manager. Identify in the plan an alternate to serve in the event of the Quality Control Manager's absence. The requirements for the alternate are the same as the Quality Control Manager.

3.4.5 Quality Control Personnel

In addition to Quality Control personnel specified elsewhere in the Contract, provide as part of the Quality Control organization specialized personnel to assist the Quality Control Manager for the following areas: electrical, mechanical, environmental, Cx Agent, . These individuals or specialized technical companies are directly employed by the prime Contractor and can not be employed by a supplier or subcontractor on this Project ; be responsible to the Quality Control Manager; be physically present at the Project Site during Work on the specialized peronnel's areas of responsibility; have the necessary education or experience in accordance with the experience matrix listed herein. These individuals can perform other duties but need to be allowed sufficient time to perform the specialized personnel's assigned Quality Control duties as described in the Quality Control Plan. A single person can cover more than one area provided that the single person is qualified to perform Quality Control activities in each designated and that workload allows.

Experience Matrix	
Area	Qualifications
Civil	Graduate Civil Engineer or Construction Manager with 2 years experience in the type of Work being performed on this Project or technician with 5 yrs related experience
Mechanical	Graduate Mechanical Engineer with 2 yrs experience or person with 5 years of experience supervising mechanical features of Work in the field with a construction company
Electrical	Graduate Electrical Engineer with 2 years related experience or person 5 years of experience supervising electrical features of Work in the field with a construction company
Structural	Graduate Civil Engineer (with Structural Track or Focus) or Construction Manager with 2 years experience or person 5 years of experience supervising structural features of Work in the field with a construction company
Architectural	Graduate Architect with 2 years experience or person with 5 years related experience
Environmental	Graduate Environmental Engineer with 3 years experience
Submittals	Submittal Clerk with 1 year experience
Occupied Family Housing	Person, customer relations type, coordinator experience
Concrete, Pavements and Soils	Materials Technician with 2 years experience for the appropriate area
Testing, Adjusting and Balancing (TAB) Personnel	Specialist must be a member of AABC or an experienced technician of the firm certified by the NEBB
~~Design Quality Control Manager~~	~~Registered Architect or Professional Engineer~~

3.4.6 Additional Requirement

The following are the requirements for specific parts of the Work:

a. Technicians inspecting concrete delivered to the Project Site must be certified by the American Concrete Institute

b. Manufacturer's representatives must present documentation of their delegated authority

c. Welders, welding operations, and completed welds must be inspected by an AWS Certified Welding Inspector.

The Construction Quality Management Training certificate expires after 5 years. If the Quality Control Manager's certificate has expired, retake the course to remain current.

3.4.7 Organizational Changes

Maintain the Quality Control staff at full strength at all times. When it is necessary to make changes to the Quality Control staff, revise the Quality Control Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.5 SUBMITTALS AND DELIVERABLES

Submittals, shall comply with the requirements in Section 01 33 00 SUBMITTAL PROCEDURES. The Quality Control organization is responsible for certifying that all submittals and deliverables are in compliance with the Contract requirements. When Section 01 91 00 TOTAL BUILDING COMMISSIONING are included in the Contract, the submittals required by those sections have to be coordinated with Section 01 33 00 SUBMITTAL PROCEDURES to ensure adequate time is allowed for each type of submittal required.

The Contractor may also be required to prepare an Air Monitoring Plan as part of the Work. The Air Monitoring plan shall include procedures in accordance with OSHA requirements for conducting personal air monitoring for Contractor and their subcontractor personnel that may be potentially exposed to contaminated soils and water.

3.5.1 Contractor's Daily Construction Reports

The Contractor shall fill out Daily Report as described in 01 30 00 ADMINISTRATIVE REQUIREMENTS Submit copies of the report to the Contracting Officer by 10:00 a.m. on the first work day after the day the Work was performed. E-mail a copy directly to the Contracting Officer. Include the description and activity number from the accepted progress schedule Project Schedule Baseline, and the actual start and finish dates for the Work performed. Sample forms will be provided to the Contractor electronically upon request.

3.5.2 Contractor's Weekly Contruction Reports

The Contractor shall fill out Weekly Construction Reports indicating specific items completed in the week. The description should be general and indicate any issues with the Work that week. Insert a picture of any significant progress of an activity item. Submit copies of the report to the Contracting Officer by 10:00 a.m. of the Monday following the work week. E-mail a copy directly to the Contracting Officer. Sample forms

will be provided upon request.

3.5.3 Test Results

3.5.3.1 Test Reports

Record results of all tests, inspections, and sampling taken, both passing and failing, on the Quality Control report and the Daily Construction Report, and submit separate reports for, each field test, inspection, or sampling conducted.

Test Reports, including but not limited to Factory Test Reports, Field Test Reports, and Field Inspection Reports, must comply with Section 01 33 00 SUBMITTAL PROCEDURES as well as the applicable technical Specification Section for the component of the Work being inspected or tested. In addition, the report shall cite the Contract requirements, the test, inspection, or analysis procedures used, and the actual test results. For each report, stamp conspicuously on the cover sheet in large red letters "CONFORMS" or "DOES NOT CONFORM." Reports must be signed by the authorized representative of the testing laboratory. Sample Test Report Form will be provided upon request. Indicate the following information on the report:

a. Specification Section and Paragraph Number

b. Name of the Test, Inspection, or Sampling

c. Location of Test. Inspection, or Sampling (provide sketch if necessary to clearly document location at the Site)

d. Name of Inspector/Technician

e. Name of Laboratory, if applicable

f. Date and Time of the Test, Inspection, or Sampling

g. Minimum Requirements/Acceptable Test, Inspection, or Sampling Results

h. Actual Test, Inspection, or Sampling Results

i. Repeated Inspections, Tests, Inspections, or Sampling

j. Statement indicating whether or not the Work meets the specified requirement

If approved by the Contracting Officer, actual Test Reports are submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an off-site or commercial test facility directly to the Contracting Officer. Failure to submit timely test reports as stated results in nonpayment for related Work performed and disapproval of the test facility for this Contract.

3.5.4 Field Testing Log

Review the Project documents and prepare a list of the required field tests. Submit this annotated log with your other Preconstruction submittals. Include all required Laboratory Accreditation and Validation Certificates. Tie the testing into the Project Schedule Baseline. The Testing Log shall be signed by your Quality Control Manager. A sample

Testing Log Form will be provided upon request.

Consider this list an As-Built for the Contract and maintain it daily as a log of testing. In the event of a discrepancy between the list and the Contract documents, the Contract documents take precedence. Submit the As-Built test log at Final Inspection. At a minimum, the log shall include the following information for each test, inspection, or sampling:

a. Reference to all Daily Construction Reports and Quality Control Reports with associated Test, Inspection, or Sampling Data

b. Specification Section and Paragraph Number

c. Name and Type of Test, Inspection, or Sampling

d. Results of Test, Inspection, or Sampling

e. Statement of Conformance or Nonconformance with Contract Requirements

f. Quality Control Manager's Signature

3.5.5 Nonconformance Notice

Non-compliant Work on any activity can be halted by the Contracting Officer. Payment shall not be made for an activity that is non-compliant. A Notice of Non-Compliance will be issued for non-compliant Work. The form should be issued by the Contractor's Quality Control Manager as an indication he/she is performing their duties correctly. It may also be issued by the Contracting Officer. In such cases there will be two notices of non-compliance issued: one for the non-compliant activity Work; and one for non-compliant Quality Assurance and/or Quality Control. A sample form CM-12 Notice of Non-Compliance will be provided by the Contracting Officer upon award.

Payment shall not be made on any portion of the Work for which a nonconformance notice has been issued and the Work not corrected to the satisfaction of the Contracting Officer when a notice is issued by the Contracting Officer documenting that the Work, or some portion thereof, has not been performed in accordance with the requirements of the Contract documents. Upon receipt of a Nonconformance Notice, the Contractor shall provide a written response within 7 days. The Contractor's response shall detail either (a) why they believe that the Work was performed in accordance with the Contract documents, or (b) what corrective action they intend to take, at their sole expense, to correct the nonconforming Work. If the Contractor disputes issuance of the notice, the Government will respond by either (a) withdrawing the Notice of Nonconformance or (b) directing the Contractor to correct the Work. If directed to correct the Work, the Contractor shall do so within 7 days after receipt of such direction from the Contracting Officer, or such other time as may be agreed to with the Contracting Officer.

3.6 CONTROL

Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the Contract. At least three phases of control are required to be conducted by the Quality Control Manager for each definable feature of the construction Work as follows:

3.6.1 Preparatory Phase

This phase is performed prior to beginning Work on each definable feature of Work, after all required plans/documents/materials are approved/accepted, and after copies are at the Project Site. This phase includes:

a. A review of each paragraph of applicable Specifications, reference codes, and standards. Make available during the preparatory inspection a copy of those sections of referenced codes and standards applicable to that portion of the Work to be accomplished in the field. Maintain and make available in the field for use by Government personnel until final acceptance of the Work.

b. Review of the Contract Drawings.

c. Check to assure that all materials and equipment have been tested, submitted, and approved.

d. Review of provisions that have been made to provide required control inspection and testing.

e. Review Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections.

f. Examination of the Work Area to assure that all required preliminary Work has been completed and is in compliance with the Contract.

g. Examination of required materials, equipment, and sample Work to assure that they are on hand, conform to approved Shop Drawings or submitted data, and are properly stored.

h. Review of the appropriate activity hazard analysis to assure safety requirements are met.

i. Discussion of procedures for controlling quality of the Work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of Work.

j. Check to ensure that the portion of the plan for the Work to be performed has been accepted by the Contracting Officer.

k. Discussion of the initial control phase.

l. The Government needs to be notified at least 72 hours in advance of beginning the preparatory control phase. Include a meeting conducted by the Quality Control Manager and attended by the superintendent, other Quality Control personnel (as applicable), and the foreman responsible for the definable feature. Document the results of the preparatory phase actions by separate minutes prepared by the Quality Control Manager and attach to the daily Quality Control report. Instruct applicable workers as to the acceptable level of workmanship required in order to meet Contract Specifications.

3.6.2 Initial Phase

This phase is accomplished at the beginning of a definable feature of Work. Accomplish the following:

a. Check Work to ensure that it is in full compliance with Contract requirements. Review minutes of the preparatory meeting.

b. Verify adequacy of controls to ensure full Contract compliance. Verify required control inspection and testing are in compliance with the Contract.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government needs to be notified at least 72 hours in advance of beginning the initial phase for definable feature of Work. Prepare separate minutes of this phase by the Quality Control Manager and attach to the daily Quality Control report. Indicate the exact location of initial phase for definable feature of Work for future reference and comparison with follow-up phases.

g. The initial phase for each definable feature of Work is repeated for each new crew to Work on-site, or any time acceptable specified quality standards are not being met.

h. Coordinate scheduled Work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections.

3.6.3 Follow-up Phase

Perform daily checks to assure control activities, including control testing, are providing continued compliance with Contract requirements, until completion of the particular feature of Work. Record the checks in the Quality Control documentation. Conduct final follow-up checks and correct all deficiencies prior to the start of additional features of Work which may be affected by the deficient Work. Do not build upon nor conceal non-conforming Work. Coordinate scheduled Work with Special Inspections required by Section 01 45 35 SPECIAL INSPECTIONS, the Statement of Special Inspections and the Schedule of Special Inspections.

3.6.4 Additional Preparatory and Initial Phases

Conduct additional preparatory and initial phases on the same definable features of Work if: the quality of on-going Work is unacceptable; if there are changes in the applicable Quality Control staff, on-site production supervision or work crew; if Work on a definable feature is resumed after a substantial period of inactivity; or if other problems develop.

3.7 TESTS

Unless otherwise stated herein all required sampling and testing shall be by the Contractor at their own expense. All tests shall be performed using specified testing procedures, or if no procedure is specified, the standard testing procedure used by the ASTM will be used. The Contractor

shall notify the Contracting Officer when such testing will be performed so that the test may be observed by the Contracting Officer and/or designated representatives. In addition to the specified testing requirements herein, the Government may perform additional verification testing at its own expense. All necessary samples and/or Work associated with such samples for such testing shall be provided by the Contractor at no additional cost to the Government.

Unless otherwise specified, certified tests performed earlier than one year prior to the Contract Award date are not acceptable.

3.7.1 Testing Procedure

The Contractor shall furnish all equipment, instruments, qualified personnel, and facilities, and test fluids and gases, and perform all inspections, sampling, testing, and certifications specified in the individual sections. Provide the services of independent testing laboratories, subject to the Contracting Officer's approval, to perform all specified inspection and testing.

Notify the Contracting Officer at least 72 hours in advance of the dates and times scheduled for all field tests and inspections. The Contractor shall be required to coordinate inspections and testing at the convenience of the Government. The Contracting Officer need not be present during inspection or tests, but the Contracting Officer may require inspections or tests to be scheduled at a date and time when the Contracting Officer will be able to witness such activities.

Perform specified or required tests to verify that control measures are adequate to provide a product which conforms to Contract requirements. Upon request, furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and acceptance tests when specified. Procure the services of an approved testing laboratory or establish an approved testing laboratory at the Project Site. Perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with Contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Repeat tests and inspections after each correction made to nonconforming materials and workmanship until tests and inspections indicate the materials, equipment, and workmanship meet Contract requirements. Repeated tests and inspections shall be performed at no additional cost to Government.

f. Do not cover or conceal Work until required tests and inspection results indicate that the Work conforms to Contract requirements.

3.7.2 Testing Laboratories

Provide an independent construction materials testing laboratory accredited by a laboratory accreditation authority to perform tests, inspections, or sampling required by this Contract. Construction materials testing laboratories must be accredited by a laboratory accreditation authority and will be required to submit a copy of the Certificate of Accreditation and Scope of Accreditation. The laboratory's Scope of Accreditation must include the appropriate ASTM standards (e.g., E 329, C 1077, D 3666, D 3740, A 880, E 543, etc.) listed in the technical sections of the Specifications. At a minimum, testing laboratories shall meet the following requirements:

a. Laboratories performing tests on electrical components and systems must be certified by the National Electrical Testing Association.

b. Laboratories engaged in testing of construction materials shall meet the requirements of ASTM E329.

c. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA. In addition, the laboratories shall meet all of the requirements of Alaska Department of Environmental Conservation (ADEC). The policy applies to the specific laboratory performing the actual testing, not just the Corporate Office.

d. Laboratories must be in compliance with the above, and where specified, other listed ASTM references, and must maintain a full-time registered engineer on staff to review the required services. Calibrate testing equipment at reasonable intervals with devices of an accuracy conforming to NIST or industry standards.

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the Contract Specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel is required to meet criteria detailed in ASTM D3740 and ASTM E329.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of [_____] to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the Contract amount due the Contractor.

3.7.3 On-site Laboratory

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

3.8 COMPLETION INSPECTION

Allow the Contracting Officer access to all Work for inspection. Do not conceal, cover, or enclose Work until the Contracting Officer has had an

opportunity to inspect the Work, or as approved.

Submit a Discrepancies and Omissions list (Punch List) after Punch-Out, Pre-Final, and Final Inspection. The Punch List is not an all-inclusive listing of discrepancies which exist between the Contract Specifications and the Work as performed up to the date of the list. It is also not a waiver of any other Government Claim. The Government at all times reserves all of its rights and remedies under the Contract.

3.8.1 Punch-Out Inspection

Conduct an inspection of the Work by the Quality Control Manager near the end of the Work, or any increment of the Work established by a time stated in FAR 52.211-10 Commencement, Prosecution, and Completion of Work, or by the Specifications. Prepare and include in the Quality Control documentation in the Punch List of items which do not conform to the approved Drawings and Specifications, as required by paragraph DOCUMENTATION. Include within the list of deficiencies the estimated date by which the deficiencies will be corrected. Make a second inspection the Quality Control Manager or staff to ascertain that all deficiencies have been corrected. Once this is accomplished, notify the Government that the facility is ready for the Government Pre-Final inspection.

3.8.2 Pre-Final Inspection

The Government will perform the Pre-Final Inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. Ensure that all items on this list have been corrected before notifying the Government, so that a Final inspection with the customer can be scheduled. Correct any items noted on the Pre-Final inspection in a timely manner. These inspections and any deficiency corrections required by this paragraph need to be accomplished within the time slated for completion of the entire Work or any particular increment of the Work if the Project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer is required to be in attendance at the final acceptance inspection. Additional Government personnel including, but not limited to, those from Base/Installation Facility Engineer user groups, and major commands can also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notify the Contracting Officer at least 14 days prior to the final acceptance inspection and include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining Work performed under the Contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all Contract Work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance FAR 52.246-12 Inspection of Construction.

Final completion and acceptance of Work performed under this Contract will be established by a written notice of acceptance issued by the Contracting Officer.

3.9 DOCUMENTATION

3.9.1 Quality Control Activities

Maintain current records providing factual evidence that required Quality Control activities and tests have been performed. Include in these records the Work of subcontractors and suppliers on an acceptable form that includes, as a minimum, the following information:

a. The name and area of responsibility of the Contractor/subcontractor.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of Work performed each day by NAS activity number.

d. Test and control activities performed with results and references to Specifications/Drawings requirements. Identify the control phase (Preparatory, Initial, Follow-up). List of deficiencies noted, along with corrective action.

e. Quantity of materials received at the Site with statement as to acceptability, storage, and reference to Specifications/Drawings requirements.

f. Submittals and deliverables reviewed, with Contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and Specifications.

3.9.2 Verification Statement

Indicate a description of trades working on the Project; the number of personnel working; weather conditions encountered; and any delays encountered. Cover both conforming and deficient features and include a statement that equipment and materials incorporated in the Work and workmanship comply with the Contract. Furnish these records in report form to the Government daily within 24 hours after the date covered by the report, except that reports need not be submitted for days on which no Work is performed. As a minimum, prepare and submit one report for every 7 days of no Work and on the last day of a no work period. All calendar days need to be accounted for throughout the life of the Contract. The first report following a day of no work will be for that day only. Reports need to be signed and dated by the Contractor Quality Control Manager. Include copies of test reports and copies of reports prepared by all subordinate Quality Control personnel within the Quality Control Manager Report.

3.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. Take immediate corrective

action after receipt of such notice. Such notice, when delivered to the Contractor at the Project Site, will be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer can issue an order stopping all or part of the Work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders will be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

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SECTION 01 45 35

SPECIAL INSPECTIONS
11/21

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7-16	(2017; Errata 2018; Supp 1 2018) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC	(2021) International Building Code

U.S. DEPARTMENT OF DEFENSE (DOD)

UFC 3-301-01	(2019) Structural Engineering

1.2 GENERAL REQUIREMENTS

Perform Special Inspections in accordance with the Statement of Special Inspections and Chapter 17 of ICC IBC. Provide a "Statement of Special Inspections" form in accordance with Chapter 17 of ICC IBC to be approved by the Contracting Officer. A sample form will be provided upon request. The statement shall be prepared and sealed by the Contractor. Additionally, clearly identify Special Inspections on the Project Schedule.

Special Inspections are to be performed by an independent third party and are intended to ensure that the Work of the Prime Contractor is in accordance with the Contract Documents and applicable building codes. Special inspections do not take the place of the regular inspections performed by the Contractor's QC Manager or any testing and inspections required by other sections of the Specifications.

Inform the Contracting Officer daily of all Special Inspections performed. Provide the Contracting Officer with the results and reports when they become available. Record in the Daily Construction Report all Special Inspections performed and their results. Maintain records of all on-site inspections and tests and make them available to the Contracting Officer. Submit Special Inspection reports as required by this Section and per the Technical Sections. Monitor the Special Inspection effort with the Contracting Officer.

1.3 DEFINITIONS

1.3.1 Continuous Special Inspections

Continuous Special Inspections is the constant monitoring of specific

tasks by a special inspector. These inspections must be carried out continuously over the duration of the particular tasks.

1.3.2 Periodic Special Inspections

Periodic Special Inspections is Special Inspections by the special inspector who is intermittently present where the Work to be inspected has been or is being performed.

1.3.3 Special Inspector (SI)

A qualified person retained by the Contractor and approved by the Contracting Officer as having the competence necessary to inspect a particular type of construction requiring Special Inspections. The SI must be an independent third party hired directly by the Prime Contractor.

1.3.4 Third Party

A Special Inspector must not be an employee of the Contractor or of any subcontractor performing the Work to be inspected.

1.3.5 Structural Engineer of Record (SER)

A registered design professional contracted by the Government as an A/E responsible for the overall design and review of submittal documents prepared by others. The SER is registered or licensed to practice their respective design profession as defined by the statutory requirements of the professional registration laws in state in which the design professional works. The SER is also referred to as the Engineer of Record (EOR) in design code documents.

1.3.6 Statement of Special Inspections (SOSI)

A document developed by the SER identifying the material, systems, components and Work required to have Special Inspections and the required frequency for each in accordance with ICC IBC Chapter 17. This statement should be included with the Project Specifications..

1.3.7 Definable Feature of Work (DFOW)

An inspection group that is separate and distinct from other inspection groups, having inspection requirements and/or inspectors that are unique.

1.3.8 Designated Seismic System

Those nonstructural components that require design in accordance with ASCE 7-16 Chapter 13 and for which the component importance factor, Ip, is greater than 1.0. This designation applies to systems that are required to be operational following the Design Earthquake for RC I - IV structures and following the MCER for RC V structures. All systems in RC V facilities designated as MC-1 in accordance with UFC 3-301-01 are considered part of the Designated Seismic Systems. Designated Seismic Systems will have an Importance Factor Ip = 1.5.

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

SIOR Letter of Acceptance
Special Inspections Project Manual
Special Inspections Agency's Written NDT Practices with method and evidence of regular equipment calibration where applicable
NDT Procedures and Equipment Calibration Records
Statement Of Special Inspections (SOSI)

SD-06 Test Reports

Special Inspections Daily Reports
Special Inspections Biweekly Reports

SD-07 Certificates

AISC Certified Steel Fabricator
Steel Truss Plant
Wood Truss Plant
AC472 Accreditation
Steel Joist Institute Membership
Precast Concrete Institute (PCI) Certified Plant
Certificate of Compliance
Special Inspector of Record Qualifications
Special Inspector Qualifications
Qualification Records for NDT technicians

SD-11 Closeout Submittals

Interim Report of Special Inspections
Comprehensive Final Report of Special Inspections

1.4.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.5 STATEMENT OF SPECIAL INSPECTIONS (SOSI)

The SOSI form shall be prepared and sealed by the Contractor. Submit the SOSI form to the Contracting Officer for approval a minimum of 14 days prior to commencing construction. At a minimum, the SOSI form shall provide:

a. The agency requiring the special inspection (Contractor, or subcontractor).

b. The Definable Feature of Work to be inspected. If specific inspection requirements are defined by the Contract Drawings or Specifications, the SOSI form shall include references to where the requirements may be found.

c. The required frequency of inspections.

d. The agency required to perform the inspections.

e. Contractor or SIOR signatures acknowledging the Special Inspection requirements and responsibilities.

f. Include any required Special Inspector Qualifications Submittals as separate pages, attached to the SOSI form.

1.6 SPECIAL INSPECTOR QUALIFICATIONS

Submit qualifications for each Special Inspector .

Laboratories must be in compliance with the all associated ASTM references, the requirements of all applicable Certifying Associations, and must maintain a full-time registered engineer on staff to review the required services. Calibrate testing equipment at reasonable intervals with devices of an accuracy conforming to NIST or industry standards.

1.6.1 Special Inspector

Third Party Special Inspectors shall be either:

a. A Registered Professional Engineer, licensed to practice in the State of Alaska.

Or,

b. A Certified Inspector for the element of Work to be inspected, and with a minimum of one year related experience.

PART 2 PRODUCTS

2.1 FABRICATOR SPECIAL INSPECTIONS

Special Inspections of fabricator's Work performed in the fabricator's shop is required to be inspected in accordance with the Statement of Special Inspections unless the fabricator is certified by the approved agency to perform such Work without Special Inspections. Submit the following certification to the Contracting Officer for information to allow Work performed in the fabricator's shop to not be subjected to Special Inspections.

American Institute of Steel Construction AISC Certified Steel Fabricator.
Truss Plate Institute (TPI) steel truss plant quality assurance program certification.
Truss Plate Institute (TPI) wood truss plant quality assurance program certification.

International Accreditation Service, AC472 Accreditation
Steel Joist Institute Membership
Precast Concrete Institute (PCI) Certified Plant, Group C

At the completion of fabrication, submit a certificate of compliance, to be included with the comprehensive final report of Special Inspections, stating that the materials supplied and Work performed by the fabricator are in accordance the construction documents.

PART 3 EXECUTION

3.1 RESPONSIBILITIES

3.1.1 Quality Control Manager

a. Supervise all Special Inspectors required by the Contract documents and the IBC.

b. Verify the qualifications of all of the Special Inspectors.

c. Verify the qualifications of fabricators.

d. Maintain a 3- ring binder for the Special Inspector's daily and biweekly reports. This file must be located in a conspicuous place in the Project trailer/office to allow review by the Contracting Officer and the SER.

a.e. Maintain a rework items list that includes discrepancies noted on the Special Inspectors daily report.

3.1.2 Special Inspectors

a. Inspect all elements of the Project for which the special inspector is qualified to inspect and are identified in the Schedule of Special Inspections.

b. Attend preparatory phase meetings related to the Definable Feature of Work (DFOW) for which the special inspector is qualified to inspect.

f. Submit a copy of the daily reports to the QC Manager.

g. Discrepancies that are observed during Special Inspections must be reported to the QC Manager for correction. If discrepancies are not corrected before the special inspector leaves the Site the observed discrepancies must be documented in the daily report.

h. Submit a biweekly Special Inspection Report until all inspections are complete. A report is required for each biweekly period in which Special Inspections activity occurs, and must include the following:

(1) A brief summary of the Work performed during the reporting time frame.

(2) Changes and/or discrepancies with the Drawings, Specifications and mechanical or electrical component certification, that were observed during the reporting period.

(3) Discrepancies which were resolved or corrected.

(4) A list of nonconforming items requiring resolution.

5) All applicable test result including nondestructive testing reports.

j. At the completion of the Project submit a comprehensive final report of Special Inspections that documents the Special Inspections

completed for the Project and corrections of all discrepancies noted in the daily reports. The comprehensive final report of Special Inspections must be signed, dated and indicate the certification of the special inspector qualifying them to conduct the inspection.

k. Submit daily reports to the SIOR.

3.2 DEFECTIVE WORK

Check Work as it progresses, but failure to detect any defective Work or materials must in no way prevent later rejection if defective Work or materials are discovered, nor obligate the Contracting Officer to accept such Work.

-- End of Section --

SECTION 01 50 00

TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS
11/21

PART 1 GENERAL

1.1 WORK COVERED

This section informs the Contractor which utilities, services, and temporary facilities will be made available by the Government during the performance of Work.

Provide and maintain temporary facilities during the Contract as required by BOCA, NEC, OSHA, and NFPA codes, the U.S. Coast Guard Base's regulations, and other health and safety codes. Obtain the approval of the Contracting Officer before installing or relocating temporary facilities. Install and/or relocate temporary facilities before starting Work unless otherwise approved by the Contracting Officer.

1.2 REFERENCES

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

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C511	(2017) Reduced-Pressure Principle Backflow Prevention Assembly

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-10	Operations and Storage Areas
FAR 52.236-14	Availability and Use of Utility Services

FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH (FCCCHR)

FCCCHR List	(continuously updated) List of Approved Backflow Prevention Assemblies
FCCCHR Manual	(10th Edition) Manual of Cross-Connection Control

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2020; ERTA 20-1 2020; ERTA 20-2 2020; TIA 20-1; TIA 20-2; TIA 20-3; TIA 20-4) National Electrical Code
NFPA 241	(2019) Standard for Safeguarding Construction, Alteration, and Demolition Operations

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1	(2015; Rev L) Obstruction Marking and Lighting

U.S. FEDERAL HIGHWAY ADMINISTRATION (FHWA)

MUTCD	(2015) Manual on Uniform Traffic Control Devices

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

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1915	Confined and Enclosed Spaces and Other Dangerous Atmospheres in Shipyard Employment
29 CFR 1926	Safety and Health Regulations for Construction
29 CFR 1926, Subpart K	Electrical

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Construction Site Plan

Traffic Control Plan

Haul Road Plan

Contractor Temporary Network Cybersecurity Compliance Statements

Contractor Computer Cybersecurity Compliance Statements

Fencing Plan

SD-03 Product Data

Backflow Preventers

SD-06 Test Reports

Backflow Preventer Tests

SD-07 Certificates

Backflow Tester Certification

Backflow Preventers Certificate of Full Approval

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals

require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 CONSTRUCTION SITE PLAN

Prior to the start of Work, submit a Site Plan showing the locations and dimensions of temporary facilities (including layouts and details, interior space layout and HVAC provisions, Site Adaptation Drawings and details, and utilities capacity requirements and connection details, equipment and material storage area (on-site and off-site), and access and haul routes, avenues of ingress/egress to the fenced area and details of the fence installation. Identify any areas which may have to be graveled to prevent the tracking of mud. Indicate if the use of a supplemental or other staging area is desired. Show locations of safety and construction fences, Site trailers, construction entrances, trash dumpsters, temporary sanitary facilities, and worker parking areas.

1.5 BACKFLOW PREVENTERS CERTIFICATE

Certificate of Full Approval from FCCCHR List, University of Southern California, attesting that the design, size and make of each backflow preventer has satisfactorily passed the complete sequence of performance testing and evaluation for the respective level of approval. Certificate of Provisional Approval will not be acceptable.

1.5.1 Backflow Tester Certification

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 any company participating in any other phase of this Contract.

1.5.2 Backflow Prevention Training Certificate

Submit a certificate recognized by the State or local authority that states the Contractor has completed at least 10 hours of training in backflow preventer installations. The certificate must be current.

1.6 CYBERSECURITY DURING CONSTRUCTION

{For Reference Only: This subpart (and its subparts) relates to AC-18, SA-3, CCI-00258.} Meet the following requirements throughout the Construction process.

1.6.1 Contractor Computer Equipment

Contractor owned computers may be used for construction. When used, Contractor computers must meet the following requirements:

1.6.1.1 Operating System

The operating system must be an operating system currently supported by the manufacturer of the operating system. The operating system must be current on security patches and operating system manufacturer required updates.

1.6.1.2 Anti-Malware Software

The computer must run anti-malware software from a reputable software manufacturer. Anti-malware software must be a version currently supported by the software manufacturer, must be current on all patches and updates, and must use the latest definitions file. All computers used on this project must be scanned using the installed software at least once per day.

1.6.1.3 Passwords and Passphrases

The passwords and passphrases for all computers must be changed from their default values. Passwords must be a minimum of eight characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.6.1.4 Contractor Computer Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Computer Cybersecurity Compliance Statements for each company using contractor owned computers. Contractor Computer Cybersecurity Compliance Statements must use the template published at http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic Each Statement must be signed by a cybersecurity representative for the relevant company.

1.6.2 Temporary IP Networks

Temporary contractor-installed IP networks may be used during construction. When used, temporary Contractor-installed IP networks must meet the following requirements:

1.6.2.1 Network Boundaries and Connections

The network must not extend outside the project site and must not connect to any IP network other than IP networks provided under this project or Government furnished IP networks provided for this purpose. Any and all network access from outside the Project Site is prohibited.

1.6.3 Government Access to Network

Government personnel must be allowed to have complete and immediate access to the network at any time in order to verify compliance with this specification.

1.6.4 Temporary Wireless IP Networks

In addition to the other requirements on temporary IP networks, temporary wireless IP (WiFi) networks must not interfere with existing wireless network and must use WPA2 security. Network names (SSID) for wireless networks must be changed from their default values.

1.6.5 Passwords and Passphrases

The passwords and passphrases for all network devices and network access must be changed from their default values. Passwords must be a minimum 8 characters with a minimum of one uppercase letter, one lowercase letter, one number and one special character.

1.6.6 Contractor Temporary Network Cybersecurity Compliance Statements

Provide a single submittal containing completed Contractor Temporary Network Cybersecurity Compliance Statements for each company implementing a temporary IP network. Contractor Temporary Network Cybersecurity Compliance Statements must use the template published at http://www.wbdg.org/ffc/dod/unified-facilities-guide-specifications-ufgs/forms-graphic Each Statement must be signed by a cybersecurity representative for the relevant company. If no temporary IP networks will be used, provide a single copy of the Statement indicating this.

PART 2 PRODUCTS

2.1 TEMPORARY SIGNAGE

2.1.1 Bulletin Board

Within one calendar day of mobilization on Site and prior to the commencement of Work activities, provide a clear weatherproof covered bulletin board not less than 36 by 48 inches in size for displaying the following:

a. Notice to all employees working on federal construction Contracts form WH 1321 (the Davis-Bacon Act General Wage Decision applicable to the Contract).

b. Minimum wage poster as required by the Fair Labor Standards Act.

c. A copy of the wage decision contained in the Contract

d. Notice of Employee Rights Poster required by Executive Order 13496.

e. Equal Opportunity is the Law poster as required by the EEOC.

f. Safety and Health Information as required by 29 CFR 1926 and other information as required by Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

Locate the bulletin board at the Project Site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer.

2.1.2 Warning Signs

Post temporary signs, tags, and labels to give workers and the public adequate warning and caution of construction hazards in accordance with 29 CFR 1926 and MUTCD.

2.2 TEMPORARY TRAFFIC CONTROL

2.2.1 Barricades

Erect and maintain temporary barricades to limit public access to hazardous areas. 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 barricades will be required. Securely place barricades clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

Erect and maintain temporary barricades with warning lights where construction Work intersects existing roads, walkways, at open excavations, and where pedestrian and driver safety may be endangered in the Area of Work. Provide barriers and warning signs to re-route pedestrians and drivers around potentially dangerous areas. Barriers shall be manufacturer's standard A-frame, barrel, or Jersey style with flashing amber lights and reflective orange/white striping on both sides of the barrier. Minimum barrier height shall be 42". Monitor barricades for wind/weather conditions, and restore promptly.

2.3 FENCING

Provide fencing along the Project 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 shall be in compliance with 29 CFR 1926.

2.3.1 Polyethylene Mesh Safety Fencing

Temporary safety fencing must be a high visibility orange colored, high density polyethylene grid, a minimum of 48 inches high and maximum mesh size of 2 inches. Fencing must extend from the grade to a minimum of 48 inches above the grade and be tightly secured to T-posts spaced as necessary to maintain a rigid and taut fence. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

2.3.2 Chain Link Panel Fencing

Temporary panel fencing must be galvanized steel chain link panels 6 feet high. Multiple fencing panels may be linked together at the bases to form long spans as needed. Each panel base must be weighted down using sand bags or other suitable materials in order for the fencing to withstand anticipated winds while remaining upright. Fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection.

2.3.3 Post-Driven Chain Link Fencing

Temporary post-driven fencing must be galvanized chain link fencing 6 feet high supported by an tightly secured to galvanized steel posts driven below grade. Fence posts must be located on minimum 10 foot centers. Posts may be set in various sufaces such as sand, soil, ashpalt or concrete as necessary. Chain link fencing must remain rigid and taut with a minimum of 200 pounds of force exerted on it from any direction with less than 4 inches of deflection. Fencing and posts must be completely removed at the completion of construction and any surfaces disturbed or damaged must be restored to its original condition. Underground utilities must be located and identified prior to setting fence posts. Fence must be equipped with a lockable gate. Gate must remain locked when construction personnel are not present.

2.3.4 Construction Item Hazard Fence

Provide a minimum 6'-0" high safety hazard fence around any construction operation that poses any type of hazard if area is left unattended (Note this is fencing in addition to your fully fenced Work Area). The fence must, at a minimum, be of a durable reflective UV resistant material. Remove the fence upon completion and acceptance of the Work.

2.4 RAMPS, STAIRS, LADDERS, STAGING and SIMILAR ACCESS ELEMENTS

Provide in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS and as required to perform Work and facilitate inspections during installation. Comply with requests of Government authorities (such as OSHA inspectors) performing inspections. When permanent stairs or elevators are available for access during construction, cover and protect finished surfaces from damage and deterioration.

2.5 TEMPORARY WIRING

Provide temporary wiring in accordance with 29 CFR 1926 NFPA 241 and NFPA 70. Include monthly inspection and testing of all equipment and apparatus.

2.6 BACKFLOW PREVENTERS

Reduced pressure principle type conforming to the applicable requirements AWWA C511. Provide backflow preventers complete with, brass mounted gate valve and strainer, stainless steel or bronze, internal parts. The particular make, model/design, and size of backflow preventers to be installed must be included in the latest edition of the List of Approved Backflow Prevention Assemblies issued by the FCCCHR List and be accompanied by a Certificate of Full Approval from FCCCHR List. After installation conduct Backflow Preventer Tests and provide test reports verifying that the installation meets the FCCCHR Manual Standards. If the temporary water connection needs to be moved to another location during construction, the Contractor shall notify the Contracting Officer in writing a minimum of 5 working days prior to movement. The relocated backflow preventer shall be re-tested and re-certified.

PART 3 EXECUTION

3.1 CONTRACTOR PARKING

Construction Contract employees will park privately owned vehicles in an area designated by the Contracting Officer. Contractor parking must not interfere with existing and established parking requirements of the Government Installation.

The Contractor shall limit parking to within the limits of the Contractor's trailer compound the spaces identified by the Contracting Officer the indicated Contractor fenced staging area and Project Site .

Allow one parking space for the CI at the Project Site and two parking spaces at the trailer.

3.2 MOORAGE AND ANCHORAGE

Use of moorage or anchorage space at U.S. Coast Guard facilities will not be made available to the Contractor for this Work.

3.3 CRANE SERVICES

The Contractor is responsible for obtaining any required crane or overhead lifting services for this Work.

3.4 AVAILABILITY AND USE OF UTILITY SERVICES

Utilities, services, temporary facilities may be available in accordance with FAR 52.236-14 and only to the extent specifically provided herein. Coordinate the establishment and use of utilities, services and temporary services with the Contracting Officer. Obtain the approval of the Contracting Officer before installing any hookups or connections.

The term utility service includes, but is not limited to meters, mains, service lines, high voltage feeders, transformers, force mains, lift stations, etc. The Contractor is responsible for coordinating the Work with the utility provider to insure the utility connection to the Site is completed and that there is no delay in the prosecution of the Work or completion of the Project.

The Contractor shall not operate nor disturb the setting of control devices in the Installation's utilities system, including water, sewer, electrical, telephone, data and steam services without prior approval from the Contracting Officer.

3.4.1 Outages, Down Time or Out of Service Time:

Interruption to water, sanitary sewer, storm sewer, telephone service, electric service, air conditioning, compressed air systems, heating, fire alarm, etc. shall be considered utility outages.

The Contractor shall provide and pay for all resources to safely coordinate, investigate and operate the temporary shutdown of utilities.

The Contractor shall be required to coordinate outages at the convenience of the Government. Outages will be approved by the Contracting Officer. The Contractor shall request the Contracting Officer's permission to schedule any necessary utility outage. The request shall be in writing, and shall identify the utility, reason for outage, location of outage, proposed time of outage, and the estimated duration of the proposed outage. In addition, the request shall identify all other utilities affected by the outage, and shall include any necessary sketches, and a description of the means to fulfill energy isolation requirements in accordance with applicable OSHA standards 29 CFR 1910, 29 CFR 1915, and 29 CFR 1926, including but not limited to 29 CFR 1926, Subpart K. Where outages involve Government or Utility personnel, coordinate with the Government on all activities involving the control of hazardous energy in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

Utility outages shall be requested at least 3 working days in advance, and shall never exceed 4 hours. Permission and duration for outages will be granted by the Contracting Officer based upon the need for the utility, and upon consideration of suitable bypasses, or alternate arrangements.

Limit downtime to a minimum. If downtime, including time for deactivation and reactivation, will be greater than 1 hours, Contractor shall provide temporary service of the same capacity as that which is out of service, unless otherwise authorized by the Contracting Officer.

3.4.2 Underground Utilities

No access to or disturbance of underground utilities is anticipated for completion of the Work.

If exposed, protect underground utilities from damage.

Ensure that new utility lines are complete, except for the connection, before interrupting existing service.

3.4.3 Protection and Restoration

The Contractor shall safeguard and protect from damage all utilities encountered or uncovered. All Work to repair damage to commercial utilities shall be coordinated through the utility.

Contractor shall restore damaged piping, cable(s), and circuits to original condition and full operation if damage occurs through his failure or comply with instructions, or to obtain utility locations. Notification of damage shall be made immediately to the affected utility, to the U.S. Coast Guard representative as listed on the digging permit, and to the Contracting Officer; restoration efforts shall commence within 1 hour. Failure to commence restoration within the required time limit, or to make continuous progress toward restoration, or to complete acceptable restoration within a 4-hour time limit or an alternate time limit negotiated with and established by the Contracting Officer, shall result in suspension of all other Contract Work until acceptable restoration is completed and approved by the Contracting Officer.

In cases where a utility is damaged for reasons noted above, the Contractor shall, if lacking the qualified trades in his organization, employ as necessary such qualified trades or employ another Contractor having such trades to restore the utility to its original condition and full operation at no expense to the Government.

The Government reserves the right to protect damaged communications cables from further damage or deterioration and the right to restore priority circuits; these actions shall not relieve the Contractor of his full responsibility for restoration.

3.4.4 Temporary Utilities

Provide temporary utilities required for construction. Materials may be new or used, must be adequate for the required usage, not create unsafe conditions, and not violate applicable standards and local, state and federal codes governing the installation of the utility service being installed.

3.4.4.1 Payment for Utility Services

The following temporary services and equipment will be made available from existing outlets and supplies for use in performing this Contract, in accordance with FAR 52.236-14 and this Section

a. The Government will make all reasonably required utilities available from existing outlets and supplies, as specified in the Contract.

b. Reasonable amounts of the following utilities will be made available without charge.

Electricity

Potable Water

Compressed Air

Natural Gas

Sanitary Sewer

c. Contractor shall pay all costs incurred in connecting, converting, and transferring the utilities to the Work. Make connections, including providing backflow-preventing devices on connections to domestic water lines; and providing transformers; and make disconnections. Under no circumstances will taps to base fire hydrants be allowed for obtaining potable water.

The Contractor shall provide all other temporary services, utilities, and equipment required to complete the Work of this Contract which are not provided by the U.S. Coast Guard. These include but are not limited to the following:

a. Barricades, railings and other safety gear

b. Fire protection

c. Clean up and disposal of trash

d. Portable or temporary toilet facilities

e. Communications

Make all arrangements with the local utility providers and pay all fees, charges, and costs of any nature associated with establishing and installing temporary services which are not available via U.S. Coast Guard systems.

3.4.4.2 Temporary Connections

Obtain the approval of the Contracting Officer at least 3 working days in advance of installing any hookups or connections. Notify the Contracting Officer, in writing, 5 working days before final electrical connection is desired so that a utilities Contract can be established. The Contractor shall coordinate any temporary connections and usages with the Public Works Officer, via the Contracting Officer.

Provide and maintain necessary temporary connections, distribution lines, etc. required to measure the amount of each utility used for the purpose of determining charges.

Install temporary electrical power in accordance with National Electrical Code (NEC). Submit copies of executed permits.

3.4.5 Electricity

Provide connections, sized to provide service required for power and lighting. Locate feeder and branch wiring with area distribution boxes so that power is available throughout the Project Site by use of power cords. 120/240 and 480 electrical volt feeder service is available. Provide lighting as required for safe and secure operations. Electricity used will be furnished by the Government.

Coordinate with the local Electrical company for point of connection (POC)

location for temporary electrical service requirements beyond capabilities of existing U.S. Coast Guard systems, and for coordination for outages and Electrical System Work.

Pay all fees and electrical usage charges directly to the electrical company. Install and maintain the temporary connection, convert and transfer power to the Work, and disconnect it upon completion of Work. Usage is limited to the amount required to construct this Project and manage the temporary facilities supporting this Project. Make connection arrangements with the Contracting Officer.

3.4.6 Water

Make connections to existing facilities to provide water for construction purposes. Water used will be furnished by the Government.

Usage is limited to the amount required to construct this Project and manage the temporary facilities supporting this Project. Connections to potable water shall have an isolation valve and reduced pressure principal backflow preventer. Fire hydrants shall not be used as a source for potable water. Make connection arrangements with the Contracting Officer.

3.4.7 Sanitation

There are no existing toilet facilities for Contractor use and the Government will not provide temporary toilet facilities. The Contractor shall provide temporary services/facilities for their use. Provide chemical toilets or equally effective units for employees and require their use. Periodically empty and dispose of waste. Keep facilities clean and free of nuisance such as pests, odor, and vermin. Place facilities where directed by the Contracting Officer. Upon completion of the Work remove the sanitary facilities and leave the area clean and free of nuisance. Use of Government toilet facilities may be permitted on a Project specific basis. Toilet facilities shall be maintained by the Contractor in a sanitary condition at all times.

a. Provide and maintain within the Area of Work minimum field-type sanitary facilities approved by the Contracting Officer and periodically empty wastes 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 any municipal, district, or commercial sanitary sewer system. Any 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.

b. Provide toilet/sanitation and temporary sewer facilities in accordance with OSHA standards 29 CFR 1910 and 29 CFR 1926. Ventilate the units to control odors and fumes and empty and clean them at least once a week or more often if required by the Contracting Officer. Provide self-closing doors. Locate the facility behind the construction fence or out of the public view.

There will be no charge for use of Government sewer lines. Usage is limited to the amount required to construct this Project and manage the

temporary facilities supporting this Project.

3.4.8 Trash Collection and Disposal

Trash Collection and Disposal shall be in accordance with Section 01 74 19 CONSTRUCTION WASTE MANAGEMENT.

The Contractor shall be responsible for collection and disposal of debris and rubbish generated as part of this Work, including obtaining receptacles and vehicles. Use of existing Government trash receptacles or dumpsters is not permitted.

The Contractor shall provide all other temporary services, utilities, and equipment required, which are not provided by the U.S. Coast Guard. These include, but are not limited to: Clean up and disposal of trash. Maintaining Project Site and Area of Work in a sanitary condition at all times. Establish the facilities in manner to minimize public viewing. Contracting Officer will approve location and installation.

3.4.9 Telephone

Telephone service is not owned by the U.S. Coast Guard. Telephones normally available to the public and local to the Project Site may be used by the Contractor, otherwise dedicated telephone lines for use by the Contractor will not be provided.

Coordinate with the local telephone company for point of connection (POC) location for temporary telephone service, if required. Contractor shall pay all installation fees and telephone usage charges directly to the telephone company to provide the services desired.

3.4.10 Fire Protection

It is the inherent responsibility of the Contractor to practice good fire prevention measures while working on U.S. Coast Guard property. Perform all Work in a fire-safe manner and in accordance with Section 01 35 26 GOVERNEMENTAL SAFETY REQUIREMENTS. Provide and maintain adequate firefighting equipment during the entire construction period.

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

Comply with local fire protection regulations and, where the regulations do not apply, comply with the standards of the National Fire Protection Association.

Flammable paints, oil, varnishes, etc., stored inside structures must be in a metal storage cabinet. When stored outside, flammables must be in a controlled area. Flammables being used outside of these areas are limited to a one day supply.

On-site burning for disposal is not allowed.

3.4.11 Heating, Cooling, Ventilation and Enclosure of Work

Provide heating, cooling, ventilation and enclosure of Work as required to accommodate construction; maintain environmental conditions specified in other sections; protect materials and finishes from damage due to

temperature, humidity, or weather; cure materials and disperse humidity; and to prevent accumulations of dust, fumes, vapors, and gases.

3.4.12 Cable and Internet

Coordinate and pay all associated costs directly with the local service provider for temporary cable and internet service to the Contractor and Government trailers. Pay all fees and usage charges directly to the service provider.

3.4.13 Obstruction Lighting of Cranes

Provide a minimum of 2 aviation red or high intensity white obstruction lights on temporary structures (including cranes) over 100 feet above ground level. Light construction and installation must comply with FAA AC 70/7460-1. Lights must be operational during periods of reduced visibility, darkness, and as directed by the Contracting Officer.

3.5 TRAFFIC PROVISIONS

The Contractor shall make his own investigation of the condition of available public and private roads and of clearances, restrictions, bridge load limits, and other limitations affecting transportation and ingress and egress to the Work Site.

If during the performance of Work it becomes necessary to modify vehicular traffic patterns, notify the Contracting Officer at least 10 days prior to the proposed interruption date. The plan shall be approved prior to the start of activities affecting traffic.

3.5.1 Maintenance of Traffic

a. Submit a Traffic Control Plan and Fencing Plan to the Contracting Officer for approval. The plan shall show, but not be limited to, traffic flow pattern, location of warning signs, flaggers, barricades, etc. The Contractor shall evaluate, as part of the road closure plan, area-wide traffic flow as it is affected by construction activities. The Contractor shall sequence their Work to maintain access and continuity of Base operations. The plan must be in accordance with State and local regulations and the MUTCD, Part VI. Make all notifications and obtain any permits required for modification to traffic movements outside Station's jurisdiction.. Contractor may move oversized and slow-moving vehicles to the Project Site provided requirements of the highway authority have been met.

b. For road closures, or traffic modifications; submit an "outage request" to the Contracting Officer in accordance with Section 01 14 00 WORK RESTRICTIONS.

c. Conduct operations in a manner that will not close any thoroughfare or interfere in any way with traffic on railways or highways except with written permission of the Contracting Officer at least 15 calendar days prior to the proposed modification date, and

d. Conduct Work so as to minimize obstruction of traffic, and maintain traffic on at least half of the roadway width at all times. Obtain approval from the Contracting Officer prior to starting any activity that will obstruct traffic.

e. Sign roads in the Area of Work to indicate road closures and alternative routes. Post signs to indicate pending road closures 3 days prior to the actual closure. Install signs upstream of closure to warn traffic in advance of closed section. Coordinate all signage requirements with the Contracting Officer.

f. Provide, erect, and maintain, at Contractors expense, lights, barriers, signals, passageways, detours, and other items, as required by the Contracting Officer, authority having jurisdiction, and including but not limited to the following:

(1) Life Safety Signage

(2) Overhead Protection

(3) The Contractor shall erect a temporary barrier(s) to demark their Work Area(s). Where necessary, the barriers should be supplemented with traffic control and informational signs.

(4) Temporary barriers shall be erected to delineate a corridor through which tenant vehicles and equipment can pass, and temporary fencing shall be installed to control normal pedestrian pathways.

(5) Provide barricades around all trenches and holes.

g. For intermittent closures, any one-way temporary traffic, or construction activities which affect an open road, provide flagmen to direct traffic around obstructions or equipment.

h. Make all notifications and obtain any permits required for modification to traffic movements outside U.S. Coast Guard's jurisdiction.

3.5.1.1 Closure Restrictions

Single lane traffic through the Main Front Gate may be allowed on base during regular working hours, except during the morning and afternoon rush hour periods (0630 to 0830 & 1500 to 1700), with 72 hour advance notification to and approval by the Contracting Officer and the Base Security Officer.

A minimum of 1 lane traffic shall be provided to all buildings, residences, piers, parking lots and training facilities at all times.

The loop road system around the base shall be completely open on one side at all times with the following additional requirements:

a. The Contractor shall provide signs and barricades/drums with blinking lights to close roads, detour traffic, and reroute traffic.

b. Construction activities that require the closure of a two way street to a single lane traffic flow shall provide all necessary traffic flow devices (including all necessary flagmen) for maintaining traffic flow in both directions at the Contracting Officer's approved rates of movement (e.g., no unreasonably traffic flow delays).

3.5.2 Protection of Traffic

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 any damage to roads caused by construction operations.

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. Traffic Control devices shall be constructed and installed in accordance with the Alaska Traffic Manual.

Provide temporary barriers with warning lights where construction Work intersects existing roads, walkways, at open excavations, and where pedestrian and driver safety may be endangered in the Area of Work. Provide barriers and warning signs to re-route pedestrians and drivers around potentially dangerous areas. Barriers shall be manufacturer's standard A-frame, barrel, or Jersey style with flashing amber lights and reflective orange/white striping on both sides of the barrier. Minimum barrier height shall be 42". Monitor barricades for wind/weather conditions, and restore promptly.

Provide and maintain warning lights and signs as necessary to prevent damage or injury. Keep warning lights burning from dusk to dawn.

Unless required to be filled with soil by other sections of these Specifications, provide trench plates for excavations in roads left open overnight on U.S. Coast Guard property. Comply with local city, state requirements off U.S. Coast Guard property.

3.5.3 Rush Hour Restrictions

Do not interfere with the peak traffic flows preceding and during normal operations for AIRSTA Sitka without notification to and approval by the Contracting Officer.

3.5.4 Dust Control

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

3.6 CONTRACTOR'S TEMPORARY FACILITIES

Maintain a tidy Work Site.

3.6.1 Field Offices

Provide and maintain administrative construction field office facilities at the Project Site. Locate field office facilities as directed by the Contracting Officer Government office and warehouse facilities will not be available to the Contractor's personnel.

3.6.1.1 Construction Field Office

Furnish, install, and maintain an administrative Construction Field Office for use of Contractor personnel.

3.6.1.2 Quality Control Manager Records and Field Office

Furnish, install, and maintain an office on the Project Sitea separate room in the Construction Field Officewhich may be included in the Construction Trailer with approximately 100 square feet of useful floor area for the exclusive use of the Quality Control Manager. File quality control records in the Quality ControlField Office and make available at all times to the Government.

3.6.1.3 Mobile and Trailer-Type Field Office

Furnish and maintain a trailer-type mobile ConstructionQuality Control Field Office acceptable to the Contracting Officer to meet the requirements of the minimum field office facilities specified above.

Provide Two separate offices for exclusive use of the Superintendent, and Quality Control Manager. Each office shall have full walls and a door.

Provide a separate conference room.

In addition, provide the following for each field office facility:

a. Battery operated smoke and carbon monoxide detectors and alarms

b. At least one entance door with a standard cylinder lock and dead bolt, with two keys for each lock.

c. Sufficient number of adjustable windows for adequate light and ventilation, and with locking hardware. Arrange the windows to open and to be securely fastened from the inside.

d. Provide stairs to access all doors as required.

e. LED lights providing a minimum illumination of equal to 90 foot candles in each room.

f. At least eight duplex receptacles (15 amp, 120 VAC).

g. Self-contained indoor plumbing facilities; sink, toilet, hot and cold water. Provide necessary maintenance to insure uninterrupted usage of plumbing facilities. This includes providing pumping services for trailer holding tanks on a weekly schedule so that the tank is never too full to be used.

h. A hot and cold bottled water dispenser, capable of dispensing water at 60 degrees or 150 degrees on demand. Provide 10 gallons of bottled water per week.

3.6.1.3.1 Contractor Provided Furnishings for Field Offices

For each field office facility, provide the following:

a. One 4' x 8' plan table

b. One standard size office desk and chair for each office provided.

c. One file cabinet, legal size-with four drawers.

d. One 3' x 4' x 4 shelf bookcase.

e. One 3' x 5' White board with two packets of colored pens and eraser.

3.6.1.3.2 Contractor Provided Telecomm Services for Field Offices

Provide and pay for telephone and internet services for each field office facility and conference room as follows:

a. Tone keyed telephone lines, 1 for normal telephone use and 1 for teleconferencing. Coordinate and pay for connection to the local telephone company system and provide long-distance access.

b. Furnish and install two touch tone cordless, 9 GHZ phone handsets, speaker phone, dual key pads, and memory for auto-dialing 20 numbers. One phone shall be on the base station, which shall include a digital answering machine. Provide a separate teleconferencing phone for the conferencing room conceal wiring and power for teleconferencing phone to avoid tripping hazard.

c. One Cable High speed Internet Connection (Business connection minimum of 5 mbs upload speed) with a 4 port router with wireless.

3.6.1.3.3 Contractor Provided Computers and Software

Contractor shall provide and install all software and computers, monitors, printers, and other hardware as necessary to facilitate all aspects of Contractor's Construction Administration Services and Quality Control. There should be no expectation that the Government will provide any software and/or equipment for the Contractor's use including but not limited to the Contractor's employees and subcontractors. At a minimum, the Contractor shall provide one laptop computer for their exclusive use.

Install and test the software prior to delivery to the U.S. Coast Guard. Deliver the desktop and laptop computer packages to the Contracting Officer at the Site and setup.

Maintain and repair computers during the course of the Contract. Repair or replace broken units within 48 hours notice by the Government.

3.6.1.3.4 Additional Requirements for Contractor Provided Field Office Equipment

In addition to the computer and software requirements above, the Contractor shall furnish, install, and maintain the following:

a. Provide and pay for 1 full service Internet account, direct wired for the desktop in the trailer.

b. Provide and pay for a 4G wireless hotspot unlimited use for the laptop.

c. One (600 X 800 dpi) color printer and 6 spare ink cartridge sets, 8 reams of 8.5" x 11" paper

d. A self feeding copy machine and self feeding digital scanner:

(1) Provide a machine capable of reduction and enlargement, providing copies up to 11 by 17 inches. Provide maintenance and service as required with two-day service time (downtime) maximum. Provide minimum of 8 reams of 8-1/2"x11 paper and 2 reams of 11x17" paper per month. Provide constant supply of two spare toner cartridges.

(2) Provide a machine capable of data transmission for use by the Contracting Officer to their e-mail account and computer via the network you setup. Provide periodic maintenance as required, two-day service time maximum. The Scanner shall self feed up to 20 -11" x17" sheets and have a capacity to transmit them as Jpegs, Adobe or Tiff files. Scanner shall also be able to e-mail directly to the internet.

3.6.1.3.5 Contractor Provided Reference Documents for Field Offices

Provide the following latest edition items for the exclusive use of the Government within 60 days of Contract Award. Items will remain the property of the Government at the completion of the Contract.

a. International Building Code with Local City and State Amendments (2 copies)

b. International Plumbing Code with Local City and State Amendments (2 Copies)

c. International Electrical Code with Local City and State Amendments (2 copies)

d. International Mechanical Code with Local City and State Amendments (2 copies)

e. ACI Manual of Concrete Practice Part 3

f. AISC Manual of Steel Construction (ASD)

g. ASTM Standards in Building Codes(2copies of the complete set)

h. Gypsum Construction Handbook (US Gypsum Company)

i. National Electrical Code NFPA-70

j. National Electrical Code Handbook

k. SMACNA Architectural Sheet Metal Manual

l. OSHA - Labor 29 Part 1910 (4 copies)

m. OSHA - Labor 29 Part 1926 (4 copies)

3.6.1.3.6 Appearance of Trailers

a. Trailers which are rusted, have peeling paint or are otherwise in need of repair will not be allowed on Installation property. Trailers must present a clean and neat exterior appearance and be in a state of good repair.

b. Maintain the temporary facilities inside and out. Failure to do so will be sufficient reason to require their removal. Sweep out and mop the Construction Field Offices every two weeks minimum, coordinate cleaning with the Contracting Officer.

c. After completion of the Work, remove the entire structure from the Site.

3.6.2 Storage Areas

No On-Base covered storage facilities are available to the Contractor. Contractor shall be responsible for providing covered storageobtaining off-site storage as needed. The Government will furnish a material and equipment storage area as indicated in the Project Drawings or as designated by the Contracting Officer in accordance with FAR 52.236-10. Space may be limited and the Contractor shall be responsible for obtaining off-site storage as needed.

A Contractor's laydown area will be provided in the general vicinity of the Work Site. Coordinate location/use with the Contracting Officer. No dedicated laydown area will be provided on the hangar deck. All lay down or staging areas for materials, equipment must be located within the indicated Contractor fenced staging area and Project Site. The Contractor shall plan for the laydown area for this Project to be located in the vicinity of the Contractor's trailer compound. The specific laydown area will be identified by the Contracting Officer based on availability.

The Contractor shall erect temporary barriers to demark their Work/storage Areas. There should be no expectation of security for the Contractor's materials. Construct a temporary 6 foothigh chain link fence around trailers and materials. Fence posts may be driven, in lieu of concrete 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 storage area by the Contracting Officer away from the vicinity of the Work Site but within the installation boundaries. Do not stockpile materials outside the fence in preparation for the next day's Work. Park mobile equipment, such as tractors, wheeled lifting equipment, cranes, trucks, and like equipment within the fenced area at the end of each work day.

The Contractor shall install security fencing around all Work and laydown areas. Fencing shall be substantial, to prevent pedestrian and vehicle access, to prevent windblown debris, and to denote areas of construction. Temporary barriers shall be erected to delineate a corridor around the Area of Work, for temporary pedestrian passage, and temporary fencing shall be installed to control/divert normal pedestrian pathways. Where necessary, the barriers should be supplemented with traffic control and informational signs. Fencing placed in existing paved areas (which are not replaced with the Work) shall be surface mounted.

3.6.2.1 Supplemental Storage Area

Upon request, and pending availability, the Contracting Officer will designate another or supplemental area for the use and storage of trailers, equipment, and materials. This area may not be in close proximity of the Work Site but will be within the installation boundaries. The area will be maintained in an clean and orderly fashion and secured if needed to protect supplies and equipment. Utilities will

not be provided to this area by the Government.

3.6.2.2 Maintenance of Storage and Laydown Areas

a. Maintain tidy laydown and storage areas. Proximity of the Work to the Air Station and operating airfields makes this particularly important. The adjacent areas are working areas. Equipment/people move past the Work area. Access to, and functions of the adjacent Site shall remain operational during construction.

b. Provide foreign object debris (FOD) countermeasures to secure materials at all Worksites. Anchor fencing as required to prevent damage from weather or Station operations. Provide a means to secure materials at the end of the work day.

c. All existing materials which are to be removed, and are not indicated or specified for reuse in the new Work, shall, unless otherwise specified, be removed from Government property at the Contractor's expense, and disposed of in accordance with Section 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT and all Federal, State, and local regulations. Remove all salvage from Government property.

d. Keep fencing in a state of good repair and proper alignment. Grassed or unpaved areas, which are not established roadways, and will be traversed with construction equipment or other vehicles, will be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways, should the Contractor elect to traverse them with construction equipment or other vehicles. Mow and maintain grass located within the boundaries of the cProject Site for the duration of the Project. Grass and vegetation along fences, buildings, under trailers, and in areas not accessible to mowers will be edged or trimmed neatly.

e. Cut grass (or annual weeds) within the construction and storage sites to a maximum 4 inch height at least once a week during the growing season, whether or not area is visible to the public to assist in rodent control. Trim the grass around fences at time of grass cutting. Maintain grass or weeds on stockpiled earth as descried above.

3.6.2.3 Storage Size and Location

The roofedenclosedopen site available for storage must be confined to the indicated operations area. The storage area will be approximately 2500 square feet.

3.6.2.4 Storage In Existing Buildings

The adjacent areas are Working Areas. Equipment/people move past the Work Area. Access to, and functions of the adjacent Site shall remain operational during construction.

The storage of material will be allowed where indicatedwill not be allowed in the building. Provide 6 foot high security fence with a lockable gate around the storage area. The Contractor shall erect temporary barriers to demark their Work/storage Areas. There should be no expectation of security for the Contractor's materials. Remove at the completion of Work.

3.6.3 Safety Systems

Protect the integrity of any installed safety systems or personnel safety devices. Obtain prior approval from the Contracting Officer if entrance into systems serving safety devices is required. If it is temporarily necessary to remove or disable personnel safety devices in order to accomplish Contract requirements, provide alternative means of protection prior to removing or disabling any permanently installed safety devices or equipment and obtain approval from the Contracting Officer.

Provide fence barriers to prevent unauthorized entry in Work Areas, where heavy equipment operates or is parked, demolition areas, and to protect existing facilities and adjacent properties from damage from construction operations. Construct and maintain barricades as required by OSHA sufficient to prevent injury to persons and damage to property.

Provide barricades around trenches and holes to prevent access.

3.6.4 Security Provisions

Provide adequate outside security lighting at the temporary facilities. The Contractor will be responsible for the security of its own equipment.

3.6.5 Weather Protection of Temporary Facilities and Stored Materials

Take necessary precautions to ensure that roof openings and other critical openings in the building are monitored carefully. Take immediate actions required to seal off such openings when rain or other detrimental weather is imminent, and at the end of each workday. Ensure that the openings are completely sealed off to protect materials and equipment in the building from damage.

3.6.5.1 Building and Site Storm Protection

When a warning of gale force winds is issued, take precautions to minimize danger to persons, and protect the work and nearby Government property. Precautions must include, but are not limited to, closing openings; removing loose materials, tools and equipment from exposed locations; and removing or securing scaffolding and other temporary work. Close openings in the Work when storms of lesser intensity pose a threat to the Work or any nearby Government property.

3.7 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 Project Site. Maintain the safety fencing during the life of the Contract and, upon completion and acceptance of the Work, remove from the Project Site.

3.8 DUMPSTERS

Equip dumpsters with a secure and/or lockable cover. Keep dumpster closed, except when being loaded with trash and debris. Locate dumpsters behind the construction fence or out of the public view. Empty Site dumpsters at least once a week, or as needed to keep the Site free of debris and trash. If necessary, provide 55 gallon trash containers to collect debris in the Work Area.

3.9 CLEANUP

The Contractor shall provide cleaning services after final inspection, immediately prior to Government acceptance including:

a. Cleaning of all windows (inside and outside), window screens, and all interior spaces. Remove packing labels, paint overspray, and other remnants of construction.

b. Remove construction debris, waste materials, packaging material and the like from the Project Site daily. Any dirt or mud which is tracked onto paved or surfaced roadways must be cleaned away. Store any 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.

Upon completion of the Project remove the bulletin board, signs, barricades, haul roads, etc. from the Project Site.

Unless specifically noted or directed otherwise by the Contracting Officer, all Contractor-furnished temporary facilities shall become property of the Contractor.

U.S. Coast Guard and Facility Partners shall have first right of refusal for all Government-furnished temporary facilities. Contracting Officer will advise Contractor as to which Government-furnished temporary facilities are to become the property of the Contractor.

Unless otherwise directed by the Contracting Officer, all Contractor property shall be removed from the Site by the Contractor upon completion of the Project.

3.10 RESTORATION OF STORAGE AREAS

After removal of trailers, materials, equipment, etc. from within fenced areas, 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 --

SECTION 01 57 19

TEMPORARY ENVIRONMENTAL CONTROLS
11/21

PART 1 GENERAL

1.1 Summary

This Specification Section covers the requirements for environmental protection, including protection of natural, historic, and archaeological resources as well as protected species and other temporary environmental controls. During all phases of this Project, the Contractor shall comply with all applicable federal, state, and local environmental requirements, including but not limited to applicable requirements of 18 AAC 70 Water Quality Standards, 40 CFR Protection of Environment, 29 CFR 1910 Occupational Safety and Health Standards, and 49 CFR 100-199 Hazardous Materials Transportation, Handling, and Storage Regulations. Contractor shall incorporate environmental requirements early, and ensure environmental compliance throughout all Project phases. Any fines, delays or other losses due to non-compliance shall be at the cost of the Contractor.

1.2 REFERENCES

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

ALASKA ADMINISTRATIVE CODE (AAC)

18 AAC 70	(2020) Water Quality Standards
18 AAC 75	(2020) Oil and Other Hazardous Substances Pollution Control
18 AAC 83	Alaska Pollutant Discharge Elimination System Program

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.236-7	Permits and Responsibilities
FAR 52.236-12	Cleaning Up
FAR 52.242-14	Suspension of Work

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

16 CFR 1302	Ban Of Extremely Flammable Contact Adhesives
16 CFR 1303	Ban of Lead-Containing Paint and Certain Consumer Products Bearing Lead-Containing Paint
16 CFR 1304	Ban of Consumer Patching Compounds Containing Respirable Free-Form Asbestos

29 CFR 1910	Occupational Safety and Health Standards
29 CFR 1910.120	Hazardous Waste Operations and Emergency Response
29 CFR 1910.1053	Respirable Crystalline Silica
29 CFR 1926.1153	Respirable Crystalline Silica
40 CFR	Protection of Environment
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards
40 CFR 60	Standards of Performance for New Stationary Sources
40 CFR 61	National Emission Standards for Hazardous Air Pollutants
40 CFR 61-SUBPART M	National Emission Standard for Asbestos
40 CFR 61.148	Standard for Insulating Materials
40 CFR 63	National Emission Standards for Hazardous Air Pollutants for Source Categories
40 CFR 64	Compliance Assurance Monitoring
40 CFR 82	Protection of Stratospheric Ozone
40 CFR 112	Oil Pollution Prevention
40 CFR 204	Noise Emission Standards for Construction Equipment
40 CFR 205	Transportation Equipment Noise Emission Controls
40 CFR 241	Guidelines for Disposal of Solid Waste
40 CFR 243	Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste
40 CFR 258	Subtitle D Landfill Requirements
40 CFR 260	Hazardous Waste Management System: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 261.7	Residues of Hazardous Waste in Empty Containers
40 CFR 262	Standards Applicable to Generators of Hazardous Waste

40 CFR 262.34	Standards Applicable to Generators of Hazardous Waste-Accumulation Time
40 CFR 263	Standards Applicable to Transporters of Hazardous Waste
40 CFR 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 266	Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 273	Standards For Universal Waste Management
40 CFR 273.2	Standards for Universal Waste Management - Batteries
40 CFR 273.4	Standards for Universal Waste Management - Mercury Containing Equipment
40 CFR 273.5	Standards for Universal Waste Management - Lamps
40 CFR 279	Standards for the Management of Used Oil
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 300.125	National Oil and Hazardous Substances Pollution Contingency Plan - Notification and Communications
40 CFR 355	Emergency Planning and Notification
40 CFR 372	Toxic Chemical Release Reporting: Community Right-To-Know
40 CFR 403	General Pretreatment Regulations for Existing and New Sources of Pollution
40 CFR 745	Lead-Based Paint Poisoning Prevention in Certain Residential Structures
40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
48 CFR 52.223-3	Hazardous Material Identification and Material Safety Data
49 CFR 100-199	Hazardous Materials Transportation,

	Handling, and Storage Regulations
49 CFR 171	General Information, Regulations, and Definitions
49 CFR 172	Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
49 CFR 173	Shippers - General Requirements for Shipments and Packagings
49 CFR 178	Specifications for Packagings

1.3 DEFINITIONS

1.3.1 Alaska Pollutant Discharge Elimination System (APDES)

The APDES Permit Program controls water pollution by regulating point sources located in the state of Alaska that discharge pollutants into Waters of the United States. See 18 AAC 83.

1.3.2 Biological Assessment

The term "Biological Assessment" as used in this Specification Section refers to a report identifying natural and biological resources that may be impacted by the Project Work. These resources include but are not limited to migratory birds and their habitats, fish habitats, marine mammals, and all threatened, protected, and endangered species.

1.3.3 Class I and II Ozone Depleting Substance (ODS)

Class I ODS is defined in Section 602(a) of The Clean Air Act. A list of Class I ODS can be found on the EPA website at the following weblink. https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances.

Class II ODS is defined in Section 602(s) of The Clean Air Act. A list of Class II ODS can be found on the EPA website at the following weblink. https://www.epa.gov/ozone-layer-protection/ozone-depleting-substances.

Most aerosols contain ODS. Use of any aerosols must be avoided unless adequate documentation is provided demonstrating that the product does not contain ODS and is approved by the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

1.3.4 Contractor Generated Hazardous Waste

Contractor generated hazardous waste is materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on-site by the Contractor to execute Work, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (e.g., methyl ethyl ketone, toluene), waste thinners, excess paints, excess solvents, waste solvents, excess pesticides, and contaminated equipment rinse water. Contractor Generated Hazardous Waste also includes Investigation-Derived Waste (IDW).

1.3.5 Electronics Waste

Electronics waste is discarded electronic devices intended for salvage, recycling, or disposal.

1.3.6 Environmental Impact Assessment

The term "Environmental Impact Assessment" as used in this Specification Section refers to a report identifying historical, archaeological, and/or culturally significant resources that may be impacted by the Project Work.

1.3.7 Environmental Management Plan (EMP)

The EMP is a Project specific Plan which identifies the minimum regulatory compliance requirements for mitigation and handling of contaminated Environmental Media. A draft final version of this Plan is developed during or prior to Design for preliminary regulatory "buy-in" and is included with the Construction Project Solicitation. The Contractor is responsible for updating the draft final version of the plan based on Contractor's proposed means and methods and key personnel. The EMP is separate from the Environmental Protection Plan (EPP).

1.3.8 Environmental Media

Any organic material that may be contaminated prior to, or may become contaminated during the course of Work. Environmental media includes but is not limited to:

a. Groundwater
b. Soil
c. Sediment
d. Surface Water
e. Indoor Air
f. Vegetation and Ground Cover

1.3.9 Environmental Pollution and Damage

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

1.3.10 Environmental Protection

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

1.3.11 Environmental Protection Officer

The term "Environmental Protection Officer" as used by this Project Specification Section refers to the representatives of the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch having authority over the environmental management and control aspects of the Project Work.

1.3.12 Environmental Protection Plan (EPP)

The Environmental Protection Plan (EPP) is prepared and submitted by the Contractor to the Government in order to demonstrate compliance with all Project Environmental Management and Protection requirements.

1.3.13 Hazardous Debris

Debris that contain listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) in accordance with 40 CFR 261. Hazardous debris also includes debris that exhibits a characteristic of hazardous waste in accordance with 40 CFR 261. Also see Solid Waste definition.

1.3.14 Hazardous Materials

Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

Hazardous material is any material that: Is regulated as a hazardous material in accordance with 49 CFR 173; or requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.120; or during end use, treatment, handling, packaging, storage, transportation, or disposal meets or has components that meet or have potential to meet the definition of a hazardous waste as defined by 40 CFR 261 Subparts A, B, C, or D. Designation of a material by this definition, when separately regulated or controlled by other Sections or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this Section for "control" purposes. Such material includes, but is not limited to, ammunition, weapons, explosive actuated devices, propellants, pyrotechnics, chemical and biological warfare materials, medical and pharmaceutical supplies, medical waste and infectious materials, bulk fuels, radioactive materials, and other materials such as asbestos, mercury, and polychlorinated biphenyls (PCBs).

1.3.15 Hazardous Waste

Hazardous Waste is any material that meets the definition of a solid waste and exhibit a hazardous characteristic (ignitability, corrosivity, reactivity, or toxicity) as specified in 40 CFR 261, Subpart C, or contains a listed hazardous waste as identified in 40 CFR 261, Subpart D.

1.3.16 Investigation-Derived Wastes (IDW)

IDW is any waste created from drilling, boring, or other site investigation activities required to identify and determine contamination at a Project Site, whether or not contamination is known to exist. IDW may include drill cuttings and mud, purge water, sampling media, PPE, etc.

1.3.17 Installation

As used in this Specification Section, "Installation" is defined as the U.S. Coast Guard property location where the Project will occur.

1.3.18 Land Application

Land Application means spreading or spraying discharge water at a rate that allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "Waters of the United States" must occur.

Comply with federal, state, and local laws and regulations.

1.3.19 National Pollutant Discharge Elimination System (NPDES)

The NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into Waters of the United States. In the state of Alaska, the state NPDES Permit Program is the Alaska Pollutant Discharge Elimination System (APDES). Where required, the APDES Permit Program is applicable to most U.S. Coast Guard District 17 Projects. The national NPDES Permit Program is generally only applicable to Projects located in Denali National Park and Metlakatla.

1.3.20 NESHAP

National Emission Standards for Hazardous Air Pollutants. The USEPA NESHAP regulation for asbestos is at 40 CFR 61-SUBPART M.

1.3.21 Oily Waste

Oily waste are those materials that are, or were, mixed with Petroleum, Oils, and Lubricants (POLs) and have become separated from that POLs. Oily wastes also means materials, including wastewaters, centrifuge solids, filter residues or sludges, bottom sediments, tank bottoms, and sorbents which have come into contact with and have been contaminated by, POLs and may be appropriately tested and discarded in a manner which is in compliance with other state and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that: It is not prohibited in other state regulations or local ordinances; the amount generated is "de minimus" (a small amount); it is the result of minor leaks or spills resulting from normal process operations; and free-flowing oil has been removed to the practicable extent possible. Large quantities of this material, generated as a result of a major spill or in lieu of proper maintenance of the processing equipment, are a solid waste. As a solid waste, perform a hazardous waste determination prior to disposal. As this can be an expensive process, it is recommended that this type of waste be minimized through good housekeeping practices and employee education.

1.3.22 Regulated Waste

Regulated waste are solid wastes that have specific additional federal, state, or local controls for handling, storage, or disposal.

1.3.23 Sediment

Sediment is soil and other debris that have eroded and have been transported by runoff water or wind.

1.3.24 Solid Waste

Solid waste is a solid, liquid, semi-solid or contained gaseous waste. A solid waste can be a hazardous waste, non-hazardous waste, or non-Resource Conservation and Recovery Act (RCRA) regulated waste. Types of solid waste typically generated at Work Sites may include:

1.3.24.1 Debris

Debris is non-hazardous solid material generated during the construction, demolition, or renovation of a structure that exceeds 2.5-inch particle size that is: a manufactured object; plant or animal matter; or natural geologic material (for example, cobbles and boulders), broken or removed concrete, masonry, and rock asphalt paving; ceramics; roofing paper and shingles. Inert materials may be reinforced with or contain ferrous wire, rods, accessories and weldments. A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

1.3.24.2 Green Waste

Green waste is the vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.

1.3.24.3 Material not regulated as solid waste

Material not regulated as solid waste is nuclear source or byproduct materials regulated under the Federal Atomic Energy Act of 1954 as amended; suspended or dissolved materials in domestic sewage effluent or irrigation return flows, or other regulated point source discharges; regulated air emissions; and fluids or wastes associated with natural gas or crude oil exploration or production.

1.3.24.4 Non-Hazardous Waste

Non-hazardous waste is waste that is excluded from, or does not meet, hazardous waste criteria in accordance with 40 CFR 263.

1.3.24.5 Recyclables

Recyclables are materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable, wiring, insulated/non-insulated copper wire cable, wire rope, and structural components. It also includes commercial-grade refrigeration equipment with Freon removed, household appliances where the basic material content is metal, clean polyethylene terephthalate bottles, cooking oil, used fuel oil, textiles, high-grade paper products and corrugated cardboard, stackable pallets in good condition, clean crating material, and clean rubber/vehicle tires. Metal meeting the definition of lead contaminated or lead based paint contaminated may not be included as recyclable if sold to a scrap metal company. Paint cans that meet the definition of empty containers in accordance with 40 CFR 261.7 may be included as recyclable if sold to a scrap metal company.

1.3.24.6 Surplus Soil

Surplus soil is existing soil that is in excess of what is required for this Work, including aggregates intended, but not used, for on-site mixing of concrete, mortars, and paving. Contaminated soil meeting the definition of hazardous material or hazardous waste is not included and must be managed in accordance with paragraph HAZARDOUS MATERIAL MANAGEMENT.

1.3.24.7 Scrap Metal

This includes scrap and excess ferrous and non-ferrous metals such as reinforcing steel, structural shapes, pipe, and wire that are recovered or collected and disposed of as scrap. Scrap metal meeting the definition of hazardous material or hazardous waste is not included.

1.3.24.8 Wood

Wood is dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included. Treated wood includes, but is not limited to, lumber, utility poles, crossties, and other wood products with chemical treatment.

1.3.25 Surface Discharge

Surface discharge means discharge of water into drainage ditches, storm sewers, creeks or "Waters of the United States". Surface discharges are discrete, identifiable sources and require a Permit from the governing agency. Comply with federal, state, and local laws and regulations.

1.3.26 Wastewater

Wastewater is the used water and solids from a community that flow to a treatment plant.

1.3.26.1 Stormwater

Stormwater is any precipitation in an urban or suburban area that does not evaporate or soak into the ground, but instead collects and flows into storm drains, rivers, and streams.

1.3.27 Waters of the United States

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

1.3.28 Wetlands

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

1.3.29 Universal Waste

The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (for example, thermostats), and lamps (for example, fluorescent bulbs). The rule is designed to reduce hazardous waste in the municipal solid waste (MSW) stream by making it easier for universal waste handlers to collect these items and send them for recycling or proper disposal. These regulations can be found at 40 CFR 273.

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Preconstruction Survey

Solid Waste Management Permit

Regulatory Notifications

Environmental Protection Plan

Stormwater Notice of Intent (for APDES coverage under the General Permit for Construction Activities)

Dirt and Dust Control Plan

Employee Training Records

Environmental Manager Qualifications

Stormwater Pollution Prevention Plan

Digging Permit

Archaeological Monitor Qualifications

Archaeological Monitoring Plan

ExDW BMP Plan

ExDW Notice of Intent (NOI)

Final EMP

Contaminated Environmental Media Contingency Plan

Regulatory Agency Work Plan

Stormwater Construction General Permit

Erosion And Sediment Control Plan (ESCP)

Hydrostatic Testing General Permit BMP Plan

Hydrostatic Testing General Permit Notice of Intent (NOI)

PWS Approval To Construct

SD-06 Test Reports

Laboratory Analysis

Inspection Reports

Monthly Solid Waste Disposal Report

NESHAP Records

SD-07 Certificates

Certificate of Competency

Erosion and Sediment Control Inspector Qualifications

ADEC Contaminated Sites Program Transport, Treatment, And Disposal Approval Form For Contaminated Media

SD-10 Operation and Maintenance Data

PWS Interim Approval To Operate

SD-11 Closeout Submittals

Stormwater Pollution Prevention Plan Compliance Notebook

Stormwater Notice of Termination (for APDES coverage under the General Permit for Construction Activities)

Waste Determination Documentation

Disposal Documentation for Hazardous and Regulated Waste

Assembled Employee Training Records
Hazardous Waste/Debris Management

Sales Documentation

Contractor Certification

As-Built Topographic Survey

Project Solid Waste Disposal Documentation Report

Archaeological Monitoring Report

MSGP As-Built Drawings

MSGP Retention Records

ExDW Notice of Termination (NOT)

EMP After Action Report

Environmental Records Binder

Hydrostatic Testing General Permit Notice of Termination (NOT)

PWS Final Approval To Operate

1.4.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.5 ENVIRONMENTAL PROTECTION REQUIREMENTS

1.5.1 General

Provide and maintain, during the life of the Contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the Project. Protect the environmental resources within the Project boundaries and those affected outside the limits of permanent Work during the entire duration of this Contract. Comply with federal, state, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

Tests and procedures assessing whether construction operations comply with Applicable Environmental Laws may be required. Analytical work must be performed by qualified laboratories; and where required by Contract Documents, law, or U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch, the laboratories must be certified.

1.6 SPECIAL ENVIRONMENTAL REQUIREMENTS

Comply with the special environmental requirements listed here:

and per all attachments and Appendices included with these Project Specifications.

Any potential disturbances outside of the Area of Work or Project Site must be approved by the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch prior to commencing any Work.

1.7 ENVIRONMENTAL LICENSES, PERMITTING, AND APPROVAL REQUIREMENTS

1.7.1 General

The Contractor shall be responsible for identifying and obtaining all required Permits, approvals, notifications, concurrences, consultations, and certifications from federal, state, and local regulatory agencies for the construction of the Project and in accordance with FAR 52.236-7 Permits and Responsibilities. Timely acquisitions of all necessary related Permits that are not included in the Contract Documents shall be the responsibility of the Contractor. This Specification supplements the Contractor's responsibility under FAR 52.236-7 Permits and Responsibilities.

Contractor shall provide copies of all required Permits, approvals, notifications, concurrences, consultations, and certifications required by this Project Specification Section to the Contracting Officer for approval prior to official submittal.

Except for those included in the Contract Documents, the Contractor is responsible to prepare all Permit applications, notices of intent, notices of termination, etc. and to pay all associated costs and fees as part of this Contract. The Contractor shall be responsible for incorporating all Permit conditions and constraints and ensuring compliance with Permits is maintained throughout the Project.

Permit application, notice of intent, and notice of termination packages shall be submitted to regulators in hard copy or electronic format, as required by the regulators. On-line applications and submittals shall be accomplished by Contractor.

The Contractor shall be responsible for all associated Permit and application fees as well as penalties issued due to violations of Permit conditions.

1.7.2 Regulatory Notifications

Provide regulatory notifications in accordance with federal, state, and local regulations. Submit copies of regulatory notifications to the Contracting Officer for review and approval prior to submittal to the appropriate Regulatory Agency. Allow 30 calendar days for each Contracting Officer review cycle. Notifications must be approved by the Contracting Officer prior to submission to Regulatory Agency. In cases where the Government will also provide public notification (e.g., stormwater permitting), coordinate with the Contracting Officer. Regulatory agency review periods vary, Contractor shall account for Regulatory Agency review periods in their schedule.

1.7.3 Digging Permit

No ground disturbing activity is anticipated on this project. No ground disturbing activityshall commence without prior notification and approval of the Contracting Officer, and a Digging Permit issued by the local authority having jurisdiction. Note that, in addition to requirements specified elsewhere, including but not limited utility locates and surveys as required by Section 01 50 00 TEMPORARY CONSTRUCTION FACILITIES AND CONTROLS, the Contractor will be required to submit an approved Environmental Management Plan (EMP) and any Regulatory Agency required Environmental Work Plans in order to obtain the Digging Permit.

1.7.4 Environmental Management Plan (EMP)

Contaminated environmental media may be encountered during excavation, ground disturbing, dewatering, construction, and demolition activities.

Presence of known contamination is described in the reference documents..

The Contractor is required to execute the overall management of the Project Site and any contaminated environmental media in accordance with the Bid Instructions, the EMP(), and as required to satisfy ADEC and EPA requirements.

1.7.4.1 Final EMP

The Contractor shall coordinate all aspects of the Work with the Project Specifications and Permitting activities, update the EMP based on Contractor personnel and means and methods, and submit a final EMP to the Contracting Officer. Final ADEC approval of the Contractor's EMP is required prior to commencement of Construction Work.

The Final EMP shall describe the procedures that will be used to monitor excavations for evidence of contamination; and handling, transportation, storage, sampling, testing, and disposal of any contaminated Environmental Media encountered during the Work.

1.7.4.2 EMP After Action Report

The Contractor shall be responsible for submitting the EMP After Action Report including retention records to the Contracting Officer for review and approval prior to Construction Contract close-out.

1.7.4.3 ADEC Contaminated Sites Program Transport, Treatment, and Disposal Approval Form for Contaminated Media

Submit the ADEC Contaminated Sites Program Transport, Treatment, and Disposal Approval Form for Contaminated Media to Contracting Officer no later than 90 days after generation of ANY contaminated environmental media.

1.7.4.4 Additional Requirements for Handling of Contaminated Environmental Media

Reference the following Project Specification Sections for additional requirements:

02 41 00 DEMOLITION AND DECONSTRUCTION

02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS

1.7.5 Contaminated Environmental Media Contingency Plan

Contractor shall develop a Contaminated Environmental Media Contingency Plan in case of inadvertent discovery or generation of contaminated environmental media.

The Contaminated Environmental Media Contingency Plan shall be included in the Environmental Protection Plan submitted by the Contractor. See paragraph "ENVIRONMENTAL PROTECTION PLAN" for additional requirements. The approved Contaminated Environmental Media Contingency Plan must also be provided and available as a stand-alone document.

In cases of inadvertent discovery of contaminated environmental media which may not be identified in the EMP, or whenever there is a need to change a procedure or personnel, the Contractor shall immediately notify

the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch. The Contractor shall be responsible for revising the final EMP and resubmitting the EMP as required to maintain regulatory agency approval and compliance with regulatory agency requirements. Stop Work and follow official EMP submittal procedures for ADEC and/or EPA approval at the direction of the Contracting Officer.

1.7.6 Solid Waste Management Permit

Provide the Contracting Officer with written notification of the quantity of anticipated solid waste or debris that is anticipated or estimated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance from the receiving location or as applicable; submit one copy of the receiving location state and local Solid Waste Management Permit or license showing such agency's approval of the disposal plan before transporting wastes off Government property.

1.7.6.1 Monthly Solid Waste Disposal Report

Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this Specification Section), amount, location, and name of the business receiving the solid waste.

1.7.7 Facility Hazardous Waste Generator Status

AIRSTA SITKA is designated as a[Large Quantity Generator][Small Quantity Generator][Conditionally Exempt-Small Quantity Generator]. Meet the regulatory requirements of this generator designation for any Work conducted within the boundaries of this Installation. Comply with provisions of federal, state, and local regulatory requirements applicable to this generator status regarding training and storage, handling, and disposal of construction derived wastes.

1.8 QUALITY CONTROL

1.8.1 Regulatory Agency Work Plan

Typically, regulatory notifications must be provided for the following (this listing is not all-inclusive): demolition, renovation, APDES defined site work, construction, removal or use of a permitted air emissions source, and remediation of controlled substances (asbestos, hazardous waste, lead paint).

Contractor shall prepare and submit a Regulatory Agency Work Plan to the Contracting Officer for approval daysprior to the Post Award Environmental Brief. The Regulatory Agency Work Plan shall include a complete listing of necessary Environmental Licenses and Permits and shall summarize the Contractor's approach to obtaining all necessary regulatory approvals and protocols for contacting each regulator.

1.8.2 Environmental Briefs

1.8.2.1 Post Award Environmental Brief

At the direction of the Contracting Officer, attend a Post Award Environmental Brief with the Contracting Officer and representatives from the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

During the Post Award Environmental Brief, review environmental commitments, conservation measures, and/or mitigation measures developed during planning with the U.S. Coast Guard. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the Installation or Project Site; and types and quantities of wastes/wastewater that may be generated during the Contract.

During the Post Award Environmental Brief, the following items should also be reviewed/addressed:

a. Attachment A - "PRELIMINARY ENVIRONMENTAL CONTROLS QUESTIONNAIRE" provided at the end of this Section.

b. Important Project considerations and procedures for compliance with the requirements and references included in the SPECIAL ENVIRONMENTAL REQUIREMENTS paragraph of this Section.

c. All relevant appendices and attachments referenced in the the ENVIRONMENTAL LICENSES, PERMITTING, AND APPROVAL REQUIREMENTS paragraph of this Section.

d. Contractor's Contaminated Environmental Media Contingency Plan if available.

e. Contractor's Environmental Manager Qualifications.

f. Contractor's Solid Waste Management Plan.

g. Important local and U.S. Coast Guard General Environmental Management Requirements.

h. Contractor's Regulatory Agency Work Plan.

i. Draft EMP and/or Contractor's EMP responsibilities.

The Contractor shall use the Post Award Environmental Brief to inform development of the Project's Environmental Protection Plan (EPP). See paragraph ENVIRONMENTAL PROTECTION PLAN (EPP) for additional information. The EPP is required for the Preconstruction Meeting Environmental Brief.

1.8.2.2 Preconstruction Meeting Environmental Brief

Prior to initiating any Work on-site, meet with the Contracting Officer and representatives from the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch to discuss the proposed Contractor's Environmental Protection Plan (EPP).

Contractor shall develop a mutual understanding with the U.S. Coast Guard relative to the details of environmental protection, including measures for protecting natural and cultural resources, required reports, required Permits, Permit requirements (such as mitigation measures), and other

measures to be taken.

Use the Preconstruction Environmental Brief to summarize the status of all necessary environmental submittals, notifications, approvals, etc. and to address any last minute Government concerns or action items.

1.8.3 Environmental Manager Qualifications

Appoint in writing an Environmental Manager for the Project Site. Submit Environmental Manager Qualifications to the Contracting Officer within 15 days after Contract Award..

The Environmental Manager must have a minimum of 10 years experience in construction with at least 5 of those years directly overseeing environmental management and protection on Projects similar in size and complexity. The individual must be familiar with the requirements of 40 CFR Protection of Environment, 29 CFR 1910 Occupational Safety and Health Standards, and 49 CFR 100-199 Hazardous Materials Transportation, Handling, and Storage Regulations. The individual shall have experience in the areas of contaminated environmental media identification, mitigation, and safety compliance. The individual must be experienced in working with environmental regulatory agencies. The Contracting Officer may request proof of the Environmental Manager's qualifications at any point in the Project if the performance of the Contractor's Environmental Manager is in question.

The Environmental Manager is directly responsible for coordinating Contractor compliance with federal, state, local, and U.S. Coast Guard requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the EPP; ensure environmental Permits are obtained, maintained, and closed out; ensure compliance with sewer and storm water Program requirements; ensure compliance with contaminated sites program requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers, etc.).

The Environmental Manager may be a collateral position; however, the person in this position must be trained to adequately accomplish the following duties:

a. Ensure waste segregation and storage compatibility requirements are met.

b. Inspect and manage Satellite Accumulation areas.

c. Ensure only authorized personnel add wastes to containers.

d. Ensure Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements.

e. Coordinate removal of waste containers;

f. Maintain the Environmental Records binder and required documentation, including environmental Permits compliance and close-out.

g. Coordinate associated OSHA practices applicable to the Environmental Work performed.

1.8.4 Employee Training Records

a. Prepare and maintain Employee Training Records throughout the term of the Contract meeting applicable 40 CFR requirements. Provide Employee Training Records in the Environmental Records Binder. Submit these Assembled Employee Training Records to the Contracting Officer at the conclusion of the Project, unless otherwise directed.

b. Train personnel to meet applicable environmental requirements. Conduct environmental protection/pollution control meetings for personnel prior to commencing construction activities. Conduct additional meetings for new personnel and when Site conditions change. Include in the training and meeting agenda: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, Waters of the United States, and endangered species and their habitat that are known to be in the area.

c. Contracting Officer's approval is required for any changes to the Environmental Manager, and/or Contractor's Environmental Protection personnel.

1.8.5 Non-Compliance Notifications

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with federal, state or local environmental laws or regulations, Permits, and other elements of the Contractor's EPP. After receipt of such notice, inform the Contracting Officer of the proposed corrective action and take such action when approved by the Contracting Officer. The Contracting Officer may issue an order stopping all or part of the Work until satisfactory corrective action has been taken.

FAR 52.242-14 Suspension of Work provides that a suspension, delay, or interruption of Work due to the fault or negligence of the Contractor allows for no adjustments to the Contract for time extensions or equitable adjustments. This is in addition to any other actions the Contracting Officer may take under the Contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.9 ENVIRONMENTAL PROTECTION PLAN (EPP)

Meet with the Contracting Officer and representatives from the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch during the Post Award Environmental Brief to discuss the information required to be provided in and addressed by the EPP in more detail. Develop a mutual understanding with the U.S. Coast Guard relative to the details for environmental protection including measures for protecting natural resources, required reports, and other measures to be taken.

An Environmental Protection Plan shall be developed and an electronic copy submitted by the Contractor to the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch within 30 days after Contract Award and not less than 10 days before the Preconstruction

Environmental Brief.

Revise the EPP throughout the Project to include any reporting requirements, changes in Site conditions, or Contract modifications that change the Project Scope of Work in a way that could have an environmental impact.

No requirement in this Specification Section will relieve the Contractor of any applicable federal, state, and local environmental protection laws and regulations. During Construction, identify, implement, and submit for approval any additional requirements to be included in the EPP. Maintain an up-to-date version on-site.

1.9.1 General Overview and Purpose

The purpose of the EPP is to present an overview of known or potential environmental issues that must be considered and addressed during construction.

Incorporate construction related objectives and targets from EMP], into the EPP.

Include in the EPP measures for protecting natural, historical, archaeological, and cultural resources; including required reports, and other measures to be taken.

At a minimum, the EPP shall provide the following information:

a. Contractor Environmental Professional(s) Qualifications and Environmental Emergency Contact Information

b. Detail on environmental commitments, mitigation and conservation measures, and applicable standards.

c. A description of the methods and procedures by which the Contractor intends to minimize/mitigate adverse impact to the environment resulting from the Work.

d. Identification of reporting and record keeping requirements.

1.9.2 EPP Contents

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

1.9.2.1 Title Page

Provide a title page identifying the Project, location, revision date, and Contract Number(s). The title page shall be followed by a table of contents with hyperlinks to each of the following sections.

1.9.2.2 Environmental Emergency Contact Information

Include a dedicated page or pages for environmental emergency contact information (name, organization or agency, office phone number, cell phone number, and e-mail address).

1.9.2.3 Executive Summary

Provide a brief description of each specific plan required by

environmental Permit or elsewhere in this Contract such as Environmental Management Plan (EMP), contaminant prevention plan, Contaminated Environmental Media Contingency Plan, solid waste management plan, air pollution control plan, Non-Hazardous Solid Waste Disposal Plan.

1.9.2.4 Introduction

Following the Executive Summary, the EPP should include an Introduction section. The Introduction section shall provide a description of the duties, procedures, communications and training, along with General Project Site Information and Work Plans.

Include the following items in the Introduction section of the EPP:

1.9.2.4.1 Duties

The duties and level of authority assigned to the person(s) on the Project Site who oversee environmental compliance, such as who is responsible for adherence to the EPP, who is responsible for spill cleanup and training personnel on spill response procedures, who is responsible for manifesting hazardous waste to be removed from the Site (if applicable), and who is responsible for training the Contractor's environmental protection personnel.

1.9.2.4.2 Procedures

A copy of any standard or Project-specific operating procedures that will be used to effectively manage and protect the environment on the Project Site.

1.9.2.4.3 Communications

Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.

1.9.2.4.4 General Site Information

1.9.2.4.4.1 Drawings

Include Drawings showing locations of relevant items such as proposed temporary excavations or embankments; haul roads; stream crossings; jurisdictional wetlands; material storage areas; structures; sanitary facilities; storm drains and conveyances; natural, historical, archaeological, and/or cultural resources; marine mammal zones; and stockpiles of excess soil.

1.9.2.4.4.2 Work Area

Provide a Work Area Plan showing the proposed activity in each portion of the area and identify the areas of limited use or nonuse. Include measures for marking the limits of use areas, including methods for protection of features to be preserved within authorized Work Areas and methods to control runoff and to contain materials on Site, and a traffic control plan.

1.9.2.5 Environmental Commitments Developed During Planning

Contractor shall identify all required environmental Permits, approvals,

notifications, etc. from federal, state, and local regulatory agencies. The EPP shall also outline the procedure and provide draft compliance plans for any anticipated environmental regulatory compliance procedures not included in the Project Specifications or provided by the Government at Project Award.

List ALL applicable Environmental Licenses, Permits, and Approvals required for the Project. Identify notifications that have been completed and which approvals have been received. Also indicate which notifications and Permit applications must still be made. Some Permits require up to 180 days to obtain. Demonstrate that those Permits have been obtained or applied for by referencing and including copies of applicable environmental Permits or applications as appendices to the EPP. The EPP will not be approved until the Permits have been obtained.

1.9.2.6 Project Specific Environmental Permits, Licenses, Approvals, Regulations, and Issues

The EPP shall include copies of the following documents at a minimum:

a. A letter signed by an officer of the firm appointing the Environmental Manager and stating that person is responsible for managing and implementing the Environmental Program as described in this Contract. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming Work. Provide a copy of the Environmental Manager's Qualifications immediately following this letter.

b. Completed ADEC documentation and any other environmental agency regulatory approval documentation applicable to the Project. For example, if a SWPPP is required for coverage under a Stormwater General Permit, then the EPP shall also include the approved copy of the SWPPP.

c. The EPP shall always include a copy of the approved Contaminated Environmental Media Contingency Plan.

d. A copy of the approved Regulatory Agency Work Plan, revised to indicate current status of all necessary regulatory notifications.

e. An approved copy of the Final EMP.
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1.9.2.7 Prevention of Releases to the Environment

This part of the EPP shall include a description of the Contractor's means and methods to prevent releases to the environment and shall include the Contaminated Environmental Contingency Plan as well as a Spill Prevention Plan.

1.9.2.7.1 Contaminated Environmental Media Contingency Plan

At a minimum, the Contaminated Environmental Media Contingency Plan shall describe the procedures that will be used to monitor the Project Site for evidence of contamination; and handling, transportation, storage, sampling, testing, and disposal of any contaminated Environmental Media encountered during the Work.

The Contaminated Environmental Media Contingency Plan shall also include

procedures for inadvertent discovery or generation of contaminated environmental media, as well as the Contractor's means to prevent accidental releases to the environment.

When an EMP is provided or required for the Project, the Contaminated Environmental Media Contingency Plan shall include procedures for revising the EMP and obtaining and/or maintaining the necessary regulatory agency approvals. In addition to procedures for cases of inadvertent discovery or generation of contaminated environmental media which may not be identified in the EMP, the contingency plan should include procedures for when changes to Contractor personnel or Site/Work conditions may require a revision to the EMP.

1.9.2.7.2 Spill Prevention Plan

The Spill Prevention Plan shall include the Contractor's procedures to prevent any releases to the environment and notification requirements in the event of an accidental release.

This part of the EPP shall also describe management of temporary equipment fueling operations to include release prevention, on-site spill kit placement, and cleanup capabilities.

1.9.2.8 Management of Natural Resources

Management of Natural Resources includes, but is not limited to the following:

a. Land resources

b. Tree protection

c. Replacement of damaged landscape features

d. Temporary construction

e. Stream crossings

f. Fish and wildlife resources

g. Wetland areas

1.9.2.8.1 Land Resources

The Biological Assessment must identify all necessary brush and vegetation removal. Include procedures for protecting existing trees and vegetation to remain which may be impacted by the Work. Also include procedures for restoring and replacing damaged landscape features. Tree removal must be approved by the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

1.9.2.8.2 Biological Resources

The Biological Assessment must identify all necessary procedures to mitigate and prevent impact to biological resources including:

a. Migratory Birds

b. Threatened and Endangered Species

c. Fish Habitats

d. Bald Eagles

1.9.2.8.3 Wetlands and Waterways

Include general procedures for protection of wetlands and waterways. Reference applicable regulatory approvals, commitments, and compliance measures. If the Project is located within or near a protected wetland or waterway, include detailed Work restrictions and requirements.

1.9.2.8.4 Working In or Around Marine Environments

Include general requirements, safety procedures, and special environmental considerations applicable to the Project specifically related to Work in a marine environment.

1.9.2.9 Protection of the Environment from Waste Derived from Contractor Operations

Protection of the environment from Contractor generated waste includes both control and disposal of solid and sanitary waste as well as control and disposal of hazardous waste.

1.9.2.9.1 Control and Disposal of Solid and Sanitary Waste

Describe and outline the procedures for compliance with all U.S. Coast Guard and other regulatory agency requirements related to the following items:

a. Recycling.

b. Waste Minimization: Identify anticipated materials and waste for salvage, reuse, and recycling. Describe actions to promote material reuse, resale or recycling.

c. Waste Containment.

d. Non-Hazardous Waste Classification, Identification, and Management.

e. Hazardous Waste Identification and Classification.

1.9.2.9.2 Control and Disposal of Hazardous Waste

Include hazardous material control and disposal procedures as identified in the Contractor's Safety Plan, and in accordance with Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements.

This portion of the EPP shall identify the management procedures for hazardous waste to be generated. Include procedures for pollution prevention and hazardous waste minimization. As a minimum, include the following:

a. List of the types of hazardous wastes expected to be generated.

b. Procedures to ensure a written waste determination is made for appropriate wastes that are to be generated.

c. Sampling/analysis plan, including laboratory method(s) that will be used for waste determinations and copies of relevant laboratory certifications.

d. Methods and proposed locations for hazardous waste accumulation/storage (that is, in tanks or containers).

e. Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted).

f. Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268).

g. Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and similar.

h. Used oil management procedures in accordance with 40 CFR 279; Hazardous waste minimization procedures.

i. Plans for the disposal of hazardous waste by permitted facilities; and Procedures to be employed to ensure required employee training records are maintained.

1.9.2.10 Air Pollution Control

1.9.2.10.1 Dirt and Dust Control Plan

Include truck and material haul routes along with a Dirt and Dust Control Plan for controlling dirt, debris, and dust on Installation roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.

Where the Project involves any interior Work, include a plan for controlling dust and debris in interior environments.

1.9.2.10.2 Pollution Generating Equipment

Identify air pollution generating equipment or processes that may require federal, state, or local Permits under the Clean Air Act. Determine requirements based on any current U.S. Coast Guard Installation Permits and the impacts of the Project. Provide a list of all fixed or mobile equipment, machinery or operations that could generate air emissions during the Project to the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

1.9.2.10.3 Stationary Internal Combustion Engines

Identify portable and stationary internal combustion engines that will be supplied, used or serviced. Comply with 40 CFR 60 Subpart IIII, 40 CFR 60 Subpart JJJJ, 40 CFR 63 Subpart ZZZZ, and local regulations as applicable. At minimum, include the make, model, serial number,

manufacture date, size (engine brake horsepower), and EPA emission certification status of each engine. Maintain applicable records and log hours of operation and fuel use. Logs must include reasons for operation and delineate between emergency and non-emergency operation.

1.9.2.10.4 Refrigerants

Identify management practices to ensure that heating, ventilation, and air conditioning (HVAC) Work involving refrigerants complies with 40 CFR 82 requirements. Technicians must be certified, maintain copies of certification on-site, use certified equipment and log Work that requires the addition or removal of refrigerant.

1.9.2.10.5 Air Pollution-engineering Processes

Identify planned air pollution-generating processes and management control measures (including, but not limited to, spray painting, abrasive blasting, demolition, material handling, fugitive dust, and fugitive emissions). Log hours of operations and track quantities of materials used.

1.9.2.10.6 Compliant Materials

Provide the Government a list of and SDSs for all hazardous materials proposed for use on-site. Materials must be compliant with all Clean Air Act regulations for emissions including solvent and volatile organic compound contents, and applicable National Emission Standards for Hazardous Air Pollutants requirements. The Government may alter or limit use of specific materials as needed to meet the U.S. Coast Guard Installation's Permit requirements for emissions. The Environmental Protection Plan shall include methods for maintaining SDS for all products introduced to the Work, Project Site, and/or U.S. Coast Guard Property.

1.9.2.11 Noise Control

Describe procedures to mitigate noise generating construction activities and equipment concerns.

Anticipated noise concerns include: Disruption to existing operations and occupied spaces;.

1.9.2.12 Protection of Historical, Archaeological, and Cultural Resources

Describe the methods and objectives for Protection of Historical, Archaeological, and Cultural Resources.

Identify all such resources that exist at the Project Site or that may be impacted by the Work. Reference reports, commitments, approvals, and mitigation measures that have been provided and/or coordinated with agencies such as the State of Alaska Office of History and Archaeology (OHA).

Identify the procedures and mitigation measures that will be incorporated into the Work for the protection of historical, archaeological, and cultural resources.

]1.9.2.13 Incident Reporting

Provide an outline to summarize, communicate, and to clearly detail the proper procedures, notifications, reporting and treatment of discoveries, emergencies, and other potential incidents or issues, as required by all items to be included in the EPP..

1.9.2.14 Record Keeping and Reporting

Review the Project's Submittal Register and indicate all environmental submittal requirements. Identify critical path items.

Describe all reporting and notification procedures required by this Project Specification Section, including other Project Specification Sections that may be referenced herein.

Identify Project Close Out requirements and how compliance with the associated procedural requirements will be achieved. Include a copy of any regulatory notifications or Permits generated or received by the Contractor (e.g., NOIs, NOTs, letters of authorization, etc.). Make separate parts within this section that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this Specification Section.

1.10 ENVIRONMENTAL RECORDS BINDER

Maintain on-site a separate three-ring Environmental Records Binder and submit to Contracting Officer at the completion of the Project. Make separate parts within the binder that correspond to each submittal listed under paragraph CLOSEOUT SUBMITTALS in this Specification Section.

PART 2 PRODUCTS

2.1 BANNED PRODUCTS

The following listed products are prohibited by law and U.S. Coast Guard regulation from incorporation into the Work:

a. Any hazardous materials that will create EPA "P" listed waste.

b. Extremely Flammable Adhesives: In accordance with 16 CFR 1302 non-aerosol contact adhesives and similar liquids or semi-liquids with a flash point below 20F and consisting of 70% - 90% solvents by weight are prohibited.

c. Lead-Based Paint (LBP): In accordance with 16 CFR 1303, paint and similar surface coating materials that contain lead or lead compounds in excess of 0.06% of the dry film weight are prohibited. Products and furnishings coated with LBP are also prohibited.

d. Asbestos Containing Material (ACM): In accordance with 16 CFR 1304, any patching or binding ACM that must be mixed with water or that is a ready-mix paste and does not contain resins or other bonding agents is prohibited. In accordance with 40 CFR 61.148, the use of ACM for insulating and covering materials is prohibited if the material will be friable after installation.

e. CFC's: In accordance with 40 CFR 82, air horns, cleaning fluid, flexible plastics, foam products aerosols and pressurized containing CFC's are prohibited.

f. PCB's: In accordance with 40 CFR 761, items with a PCB concentration equal to or greater than 50 ppm are prohibited. Furthermore, no products containing any concentration of PCB's are permitted.

g. Methylene Chloride or products containing this chemical (e.g., strippers and solvents).

h. Methyl Ethyl Ketone or products containing this chemical.

i. Hexavalent Chromium Cr(VI) (Hex Chrome) or products containing this compound.

j. Refrigerants/Ozone Depleting Substances not allowed by law or regulations.

k. Urea Formaldehyde and any products containing this chemical (e.g., resins, foam insulation, lumber, etc.)

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

a. Minimize interference with, disturbance to, and damage to fish, wildlife, and plants, including their habitats. Prior to the commencement of activities, consult with the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch, regarding rare species or sensitive habitats that need to be protected. The protection of rare, threatened, and endangered animal and plant species identified, including their habitats, is the Contractor's responsibility.

b. Preserve the natural resources within the Project boundaries and outside the limits of permanent Work. Restore to an equivalent or improved condition upon completion of Work that is consistent with the requirements of the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch or as otherwise specified. Confine construction activities to within the limits of the Work indicated or specified.

3.1.1 Flow Ways

Do not alter water flows or otherwise significantly disturb the native habitat adjacent to the Project and critical to the survival of fish and wildlife, except as specified and permitted.

3.1.2 Vegetation

a. Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the Contracting Officer's permission. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer. Where such use of attached ropes, cables, or guys is authorized, the Contractor is responsible for any resultant damage.

b. Protect existing trees that are to remain to ensure they are not injured, bruised, defaced, or otherwise damaged by construction operations. Remove displaced rocks from uncleared areas. Coordinate with the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch to determine appropriate action for trees and other landscape features scarred or damaged by equipment operations.

3.1.3 Streams

a. Stream crossings must allow movement of materials or equipment without violating water pollution control standards of the federal, state, and local governments. Construction of stream crossing structures must be in compliance with any required Permits including, but not limited to, Clean Water Act Section 404, and Section 401 Water Quality.

b. The Contracting Officer's approval and appropriate Permits are required before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, install temporary culverts or bridges. Obtain Contracting Officer's approval prior to installation. Remove temporary culverts or bridges upon completion of Work, and repair the area to its original condition unless otherwise required by the Contracting Officer.

3.2 AIR RESOURCES

Comply with all local, state, and federal regulations including 40 CFR 64 and state air emission and performance laws and standards.

3.2.1 Air Permits

Notify the U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch Environmental Protection Officer or Air Program Manager, through the Contracting Officer, at least months prior to bringing equipment, assembled or unassembled, onto the Installation , so that Air Permits may be updated. Necessary permitting time must be considered in regard to construction activities.

3.2.2 Burning

Burning is prohibited at all U.S. Coast Guard District 17 Installations and Project Sites.

3.2.3 Accidental Venting of Refrigerant

Accidental venting of a refrigerant is a release and must be reported immediately to the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

3.2.4 Dust Control

Keep dust down at all times, including during nonworking periods. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning nonparticulate debris such as steel reinforcing bars. Only wet cutting will be permitted for cutting concrete

blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster. Since these products contain Crystalline Silica, comply with the applicable OSHA standard, 29 CFR 1910.1053 or 29 CFR 1926.1153 for controlling exposure to Crystalline Silica Dust.

3.2.4.1 Particulates

Dust particles, aerosols and gaseous by-products from construction activities, and processing and preparation of materials (such as from asphaltic batch plants) must be controlled at all times, including weekends, holidays, and hours when Work is not in progress. Maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and other Work Areas within or outside the Project boundaries free from particulates that would exceed 40 CFR 50, state, and local air pollution standards or that would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, baghouse, scrubbers, electrostatic precipitators, or other methods will be permitted to control particulates in the Work Area. Sprinkling, to be efficient, must be repeated to keep the disturbed area damp. Provide sufficient, competent equipment available to accomplish these tasks. Perform particulate control as the Work proceeds and whenever a particulate nuisance or hazard occurs. Comply with state and local visibility regulations.

3.2.4.2 Abrasive Blasting

Blasting operations cannot be performed without prior approval of the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch. The use of silica sand is prohibited in sandblasting.

Provide tarpaulin drop cloths and windscreens to enclose abrasive blasting operations to confine and collect dust, abrasive agent, paint chips, and other debris. Perform Work involving removal of hazardous material in accordance with 29 CFR 1910.

3.2.5 Odors

Control odors from construction activities. The odors must be in compliance with state regulations and local ordinances and may not constitute a health hazard.

3.3 WASTE MINIMIZATION

Minimize the use of hazardous materials and the generation of waste in accordance with the procedures identified in the approved EPP and in accordance with U.S. Coast Guard standards.

3.3.1 Salvage, Reuse and Recycle

To the extent practicable, all scrap metal must be sent for reuse or recycling and will not be disposed of in a landfill.

Include the name, physical address, and telephone number of the hauler, if transported by a franchised solid waste hauler. Include the destination and, unless exempted, provide a copy of the state or local Permit (cover) or license for recycling.

3.3.2 Nonhazardous Solid Waste Diversion Report

Maintain an inventory of nonhazardous solid waste diversion and disposal of construction and demolition debris. Submit a report to the Contracting Officer on the first working day after each fiscal year quarter, starting the first quarter that nonhazardous solid waste has been generated. Include the following in the report:

Construction and Demolition (C&D) Debris Disposed	~~[_____] [~~cubic yards~~][tons],[cubic meters]~~ as appropriate
C&D Debris Recycled	~~[_____] [~~cubic yards~~][~~tons~~],[cubic meters]~~ as appropriate
Total C&D Debris Generated	~~[_____] [~~cubic yards~~][~~tons~~],[cubic meters]~~ as appropriate
Waste Sent to Waste-To-Energy Incineration Plant (This amount should not be included in the recycled amount)	~~[_____] [~~cubic yards~~][~~tons~~],[cubic meters]~~ as appropriate

3.4 WASTE MANAGEMENT AND DISPOSAL

Establishment of any waste accumulation area requires approval by the U.S. Coast Guard Installation, Contracting Officer, and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

3.4.1 Waste Determination Documentation

Complete a Waste Determination form (provided at the pre-construction conference) for Contractor-derived wastes to be generated. All potentially hazardous solid waste streams that are not subject to a specific exclusion or exemption from the hazardous waste regulations (e.g., scrap metal, domestic sewage) or subject to special rules, (lead-acid batteries and precious metals) must be characterized in accordance with the requirements of 40 CFR 261 or corresponding applicable state or local regulations. Base waste determination on user knowledge of the processes and materials used, and analytical data when necessary. Consult with the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branchfor guidance on specific requirements. Attach support documentation to the Waste Determination form. As a minimum, provide a Waste Determination form for the following waste (this listing is not inclusive): oil- and latex -based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and containers of the original materials.

3.4.2 Solid Waste Management

3.4.2.1 Project Solid Waste Disposal Documentation Report

Contractor must maintain Hazardous and Non-Hazardous Waste Manifests and submit LDR forms in accordance with 49 CFR 172 and EPA, State, and Local requirements and regulations. Include copies of all manifests and LDR forms in the Project's Solid Waste Disposal Documentation Reports.

In addition, provide copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, a statement indicating the disposal location for the solid waste that is signed by an employee authorized to legally obligate or bind the firm may be submitted. The sales documentation Contractor certification must include the receiver's tax identification number and business, EPA or state registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained for the Contractor's own use, submit the information previously described in this paragraph on the solid waste disposal report. Prices paid or received do not have to be reported to the Contracting Officer unless required by other provisions or Specifications of this Contract or public law.

3.4.2.2 Control and Management of Solid Wastes

Pick up solid wastes, and place in covered containers that are regularly emptied. Do not prepare or cook food on the Project Site. Prevent contamination of the Site or other areas when handling and disposing of wastes. At Project completion, leave the areas clean. Employ segregation measures so that no hazardous or toxic waste will become co-mingled with non-hazardous solid waste. Solid waste disposal off-site must comply with most stringent local, state, and federal requirements, including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with 49 CFR 173.

3.4.3 Control and Management of Hazardous Waste

Do not dispose of hazardous waste on Government property. Do not discharge any waste to a sanitary sewer, storm drain, or to surface waters or conduct waste treatment or disposal on Government property without written approval of the Contracting Officer.

3.4.3.1 Hazardous Waste/Debris Management

Identify construction activities that will generate hazardous waste or debris. Provide a documented waste determination for resultant waste streams. Identify, label, handle, store, and dispose of hazardous waste or debris in accordance with federal, state, and local regulations, including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Contractor must provide 35 and 45 day notification and updates to the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch for any Hazardous Waste Manifests generated.

Manage hazardous waste in accordance with the approved Hazardous Waste Management Section of the EPP. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities is identified as being generated by the Government. Prior to removal of any hazardous waste from Government property, hazardous waste manifests must be signed by the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch. Do not bring hazardous waste onto Government property. Provide the Contracting Officer with a copy of waste determination documentation for any solid waste streams that have any

potential to be hazardous waste or contain any chemical constituents listed in 40 CFR 372-SUBPART D.

3.4.3.2 Waste Storage/Satellite Accumulation/90 Day Storage Areas

Accumulate hazardous waste at satellite accumulation points and in compliance with 40 CFR 262.34 and applicable state or local regulations. Individual waste streams will be limited to 55 gallons of accumulation (or 1 quart for acutely hazardous wastes). If the Contractor expects to generate hazardous waste at a rate and quantity that makes satellite accumulation impractical, the Contractor may request a temporary 90 day accumulation point be established. Submit a request in writing to the Contracting Officer and provide the following information (Attach Site Plan to the Request):

Contract Number	[ ]
Contractor	[ ]
Haz/Waste or Regulated Waste POC	[ ]
Phone Number	[ ]
Type of Waste	[ ]
Source of Waste	[ ]
Emergency POC	[ ]
Phone Number	[ ]
Location of the Site	[ ]

Attach a Waste Determination form for the expected waste streams. Allow 10 working days for processing this request. Additional compliance requirements (e.g., training and contingency planning) that may be required are the responsibility of the Contractor. Barricade the designated area where waste is being stored and post a sign identifying as follows:

"DANGER - UNAUTHORIZED PERSONNEL KEEP OUT"

3.4.3.3 Hazardous Waste Disposal

3.4.3.4 Universal Waste Management

Manage the following categories of universal waste in accordance with federal, state, and local requirements and U.S. Coast Guard instructions:

a. Batteries as described in 40 CFR 273.2

b. Lamps as described in 40 CFR 273.5

c. Mercury-containing equipment as described in 40 CFR 273.4
Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and

mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed.

d. Aerosol cans

3.4.3.5 Electronics End-of-Life Management

Recycle or dispose of electronics waste, including, but not limited to, used electronic devices such computers, monitors, hard-copy devices, televisions, mobile devices, in accordance with 40 CFR 260-262, state, and local requirements, and U.S. Coast Guard instructions.

3.4.3.6 Disposal Documentation for Hazardous and Regulated Waste

Contact the Contracting Officer for the facility RCRA identification number that is to be used on each manifest.

3.4.4 Releases/Spills of Oil and Hazardous Substances

3.4.4.1 Response and Notifications

Spill reporting must be in accordance with all federal, state, and local requirements and regulations as well as U.S. Coast Guard Installation Integrated Emergency Response & Prevention Plan (IERPP).

Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated in accordance with 40 CFR 300. Maintain spill cleanup equipment and materials at the Project Site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the U.S. Coast Guard Installation's Command Duty Officer and Contracting Officer.

At the direction of either the Command Duty Officer or the Contracting Officer, also contact theU.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

Submit verbal and written notifications as required by the federal (40 CFR 300.125 and 40 CFR 355), state, local regulations and instructions. Provide copies of the written notification and documentation that a verbal notification was made within 20 days. Spill response must be in accordance with 40 CFR 300 and applicable state and local regulations. Contain and clean up these spills without cost to the Government.

3.4.4.2 Clean Up

Clean up hazardous and non-hazardous waste spills. Reimburse the Government for costs incurred including sample analysis materials, clothing, equipment, spill clean-up material disposal, and labor if the Government will initiate its own spill cleanup procedures, for Contractor-responsible spills, when: Spill cleanup procedures have not begun within

one hour of spill discovery/occurrence; or, in the Government's judgment, spill cleanup is inadequate and the spill remains a threat to human health or the environment.

3.4.5 Mercury Materials

Immediately report to the Environmental Office and the Contracting Officer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Contracting Officer.

Do not recycle a mercury spill cleanup; manage it as a hazardous waste for disposal.

3.4.6 Wastewater

3.4.6.1 Disposal of Wastewater

3.4.6.1.1 Treatment

Do not allow wastewater from construction activities, such as on-site material processing, concrete curing, foundation and concrete clean-up, water used in concrete trucks, and forms to enter water ways or to be discharged prior to being treated to remove pollutants. Dispose of the construction related waste water off-Government property in accordance with 40 CFR 403, state, regional, and local laws and regulations.

3.4.6.1.2 Surface Discharge

For discharge of ground water,

3.4.6.1.3 Land Application

Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing must be discharged into the sanitary sewer with prior approval and notification to the Wastewater Treatment Plant's Operator.

3.5 HAZARDOUS CONSTRUCTION MATERIAL MANAGEMENT

Comply with all requirements of the approved EPP and Safety Plan, and the Project Specifications including, but not limited to, this Section and Section 01 35 26 GOVERNMENTAL SAFETY REQUIREMENTS.

Do not bring hazardous material onto Government property that does not directly relate to requirements for the performance of this Contract. Submit an SDS and estimated quantities to be used for each hazardous material to the Contracting Officer prior to bringing the material on the U.S. Coast Guard Installation or Project Site. Typical materials requiring SDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. Use hazardous materials in a manner that minimizes the amount of hazardous waste generated. Containers of hazardous materials must have National Fire Protection Association labels or their equivalent. Certify that hazardous materials removed from the Site are hazardous materials and do not meet the definition of hazardous waste, in accordance with 40 CFR 261.

Maintain on site throughout the duration of construction: Safety Data Sheets (SDS) in accordance with 48 CFR 52.223-3, Hazardous Material

Identification and Material Safety Data, for materials required by federal or State of Alaska environmental laws, or for which the permissible Exposure Limit (PEL), Ceiling Limit, Short Term Exposure Limit (STEL), or Threshold Limit Value (TLV) has been established, and the products are introduced to Government property.

3.6 PREVIOUSLY USED EQUIPMENT

Clean previously used construction equipment prior to bringing it onto the Project Site. Equipment must be free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Consult with the U.S. Department of Agriculture jurisdictional office for additional cleaning requirements.

3.7 CONTROL AND MANAGEMENT OF ASBESTOS-CONTAINING MATERIAL (ACM)

Manage and dispose of asbestos- containing waste in accordance with 40 CFR 61. Also refer to Section 02 82 00 ASBESTOS REMEDIATION. Manifest asbestos-containing waste and provide the manifest to the Contracting Officer. Notifications to the state and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch Air Program Manager and/or Environmental Protection Officer are required before starting any asbestos Work.

3.7.1 NESHAP Records

The Contractor is responsible for NESHAP filing and follow up. Contractor must submit a copy of NESHAP records to the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch.

3.8 CONTROL AND MANAGEMENT OF LEAD

Manage and dispose of lead-contaminated waste in accordance with 40 CFR 261 and 40 CFR 745 and Section 02 83 00 LEAD REMEDIATION. Manifest any lead-contaminated waste and provide the manifest to the Contracting Officer.

3.9 CONTROL AND MANAGEMENT OF POLYCHLORINATED BIPHENYLS (PCBS)

Manage and dispose of PCB-contaminated waste in accordance with 40 CFR 761 Section 02 84 33 REMOVAL AND DISPOSAL OF POLYCHLORINATED BIPHENYLS (PCBS). Manifest any PCB-contaminated waste and provide the manifest to the Contracting Officer.

3.10 CONTROL AND MANAGEMENT OF LIGHTING BALLAST AND LAMPS CONTAINING PCBS

Manage and dispose of contaminated waste in accordance with 40 CFR 761. Also refer to Section 02 84 16 HANDLING OF LIGHTING BALLASTS AND LAMPS CONTAINING PCBS AND MERCURY.

3.11 PETROLEUM, OIL, LUBRICANT (POL) STORAGE AND FUELING

POL products include flammable or combustible liquids, such as gasoline, diesel, lubricating oil, used engine oil, hydraulic oil, mineral oil, and cooking oil. Store POL products and fuel equipment and motor vehicles in a manner that affords the maximum protection against spills into the environment. Manage and store POL products in accordance with EPA

40 CFR 112, and other federal, state, regional, and local laws and regulations. Use secondary containments, dikes, curbs, and other barriers, to prevent POL products from spilling and entering the ground, storm or sewer drains, stormwater ditches or canals, or navigable waters of the United States. Describe in the EPP (see paragraph ENVIRONMENTAL PROTECTION PLAN) how POL tanks and containers must be stored, managed, and inspected and what protections must be provided. Storage of oil, including fuel, on the Project Site is not allowed. Fuel must be brought to the Project Site each day that Work is performed.

3.11.1 Used Oil Management

Manage used oil generated on Site in accordance with 40 CFR 279. Contractor shall be responsible for disposal of all used oil. Disposal shall be at the Contractor's expense. Determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. Used oil containing 1,000 parts per million of halogenated solvents is considered a hazardous waste. Used oil mixed with a hazardous waste is also considered a hazardous waste. Dispose in accordance with paragraph HAZARDOUS WASTE DISPOSAL.

3.11.2 Oil Storage Including Fuel Tanks

Provide secondary containment and overfill protection for oil storage tanks. A spill kit shall be on site at all times. A berm used to provide secondary containment must be of sufficient size and strength to contain the contents of the tanks plus 5 inches freeboard for precipitation. Construct the berm to be impervious to oil for 72 hours that no discharge will permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Use drip pans during oil transfer operations; adequate absorbent material must be on-site to clean up any spills and prevent releases to the environment. Cover tanks and drip pans during inclement weather. Provide procedures and equipment to prevent overfilling of tanks. If tanks and containers with an aggregate aboveground capacity greater than 1320 gallons will be used on-site (only containers with a capacity of 55 gallons or greater are counted), provide and implement a SPCC plan meeting the requirements of 40 CFR 112. Do not bring underground storage tanks to the U.S. Coast Guard Installation or Project Site for Contractor use during a Project. Submit the SPCC plan to the Contracting Officer for approval.

Monitor and remove any rainwater that accumulates in open containment dikes or berms. Inspect the accumulated rainwater prior to draining from a containment dike to the environment, to determine there is no oil sheen present.

3.12 INADVERTENT DISCOVERY OF CONTAMINATED ENVIRONMENTAL MEDIA OR HAZARDOUS WASTES

Follow the procedures outlined in the approved Contaminated Environmental Media Contingency Plan. If contaminated environmental media (e.g., petroleum, oil, and lubricant (POL) contaminated soil, underground storage tanks (USTs), etc.) or suspected hazardous waste is found during construction that was not identified in the Contract Documents, the Contractor shall immediately notify the Contracting Officer and U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch. The U.S. Coast Guard will notify ADEC Prevention, Preparedness, and Response Program in accordance with 18 AAC 75 as necessary. Do not disturb this material until authorized by the Contracting Officer.

3.13 SOUND INTRUSION

Make the maximum use of low-noise emission products and equipment, as certified by the EPA and in compliance with 40 CFR 204 and 40 CFR 205. Blasting or use of explosives are not permitted without written permission from the Contracting Officer, and then only during the designated times.

Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the State of Alaska rules.

3.14 POST CONSTRUCTION CLEANUP

Clean up areas used for construction in accordance with with FAR 52.236-12 Cleaning Up. Unless otherwise instructed in writing by the Contracting Officer, remove traces of temporary construction facilities such as haul roads, Work Area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the Work. Grade parking area and similar temporarily used areas to conform with surrounding contours.

Attachment A PRELIMINARY PROJECT ENVIRONMENTAL CONTROLS QUESTIONNAIRE	
Project Title	
Project/Contract #:	
Project Location:	
1) Does the Project involve any Site or Utility Work?	
2) Will the Project result in waste streams of any of the following materials: a. Aerosols b. Lamps c. Batteries d. Solvents and/or Oily Rags e. Paints or Coatings f. Thinners or Strippers Indicate each anticipated waste stream if included in the list above.	~~[~~list each anticipated waste stream~~]~~
3) Will there be any digging or excavation?	
4a) What is the anticipated area of disturbance? 4b) Will there be more than one acre of disturbance?	4a) ~~[Indicate anticipated area of disturbance. If more than one acre (43,560 Sq. Ft.), indicate total acres (e.g., 1.2 acres)]~~ 4b) ~~[Yes][~~No~~]~~
5) Will there be more than five acres of disturbance?	
6) Will the Project discharge to Waters of the United States?	
7) Is the Project within 1500 feet of a contaminated site?	
8) Will the Project require an ADEC Qualified Environmental Professional (QEP)?	
9) Are there any known or suspected regulated materials at the Project Site or Area of Work?	
10) Does the Project Site or Area of Work require testing/sampling for regulated materials and/or contaminated environmental media?	

Attachment A PRELIMINARY PROJECT ENVIRONMENTAL CONTROLS QUESTIONNAIRE	
11) Will the Project require use or handling of regulated materials or contaminated environmental media?	
12) Will the Project require the use of any pesticides or herbicides?	
13) Is the Project located near a threatened, protected, or endangered species' habitat?	
14) Has the NEPA DSS process been completed?	
15) Has the Project been reviewed by the appropriate U.S. Coast Guard Environmental Branch/Detachment(s)?	
16) Has a Biological Assessment been conducted for the Project? If Design-Build, will the Contractor be required to provide a Biological Assessment?	
17) Does the Project include any modifications to a historically significant structure or location? Is consultation with SHPO/OHA required?	
18) Is the Project's Area of Potential Effect (APE) within an area that is considered to have a moderate or high probability of encountering Archaeological Resources?	
19) Has an Environmental Impact Assessment been conducted for the Project? If Design-Build, will the Contractor be required to provide an Environmental Impact Assessment?	
20) Is there an Environmental Management System (EMS), or other environmental management standards documentation that applies to the U.S. Coast Guard Installation where the Project will occur?	

Attachment A PRELIMINARY PROJECT ENVIRONMENTAL CONTROLS QUESTIONNAIRE	
21) Is there a Spill Prevention, Control, and Countermeasure Plan (SPCC) that applies to the U.S. Coast Guard Installation where the Project will occur?	
22) Is an Environmental Management Plan (EMP) required for the Project? If so, has the U.S. Coast Guard provided a draft copy?	
23) If the Project is not at Base Kodiak, and involves any ground disturbing activities, will a Digging Permit be required? If so, which agency will issue the Digging Permit, and what is the official Permit Title?	
U.S. Coast Guard Civil Engineering Unit Juneau Environmental Branch representative contacted:	
Date contacted:	
Comment:	
Date:	Signature:
Phone number:	
U.S. Coast Guard Base Kodiak Facilities Engineering Environmental Division representative contacted: *(Enter N/A if Project is not at Base Kodiak)*	

Attachment A PRELIMINARY PROJECT ENVIRONMENTAL CONTROLS QUESTIONNAIRE	
Date contacted:	
Comment:	
Date:	Signature:
Phone number:	

-- End of Section --

SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL
11/21

PART 1 GENERAL

1.1 DEFINITIONS

1.1.1 Co-mingle

The practice of placing unrelated materials together in a single container, usually for benefits of convenience and speed.

1.1.2 Construction Waste

Waste generated by construction activities, such as scrap materials, damaged or spoiled materials, temporary and expendable construction materials, and other waste generated by the workforce during construction activities.

1.1.3 Demolition Debris/Waste

Waste generated from demolition activities, including minor incidental demolition waste materials generated as a result of Intentional dismantling of all or portions of a building, to include clearing of building contents that have been destroyed or damaged.

1.1.4 Disposal

Depositing waste in a solid waste disposal facility, usually a managed landfill, regulated in the US under the Resource Conservation and Recovery Act (RCRA).

1.1.5 Diversion

The practice of diverting waste from disposal in a landfill, by means of eliminating or minimizing waste, or reuse of materials.

1.1.6 Final Construction Waste Diversion Report

A written assertion by a material recovery facility operator identifying constituent materials diverted from disposal, usually including summary tabulations of materials, weight in short-ton.

1.1.7 Recycling

The series of activities, including collection, separation, and processing, by which products or other materials are diverted from the solid waste stream for use in the form of raw materials in the manufacture of new products sold or distributed in commerce, or the reuse of such materials as substitutes for goods made of virgin materials, other than fuel.

1.1.8 Reuse

The use of a product or materials again for the same purpose, in its original form or with little enhancement or change.

1.1.9 Salvage

Usable, salable items derived from buildings undergoing demolition or deconstruction, parts from vehicles, machinery, other equipment, or other components.

1.1.10 Source Separation

The practice of administering and implementing a management strategy to identify and segregate unrelated waste at the first opportunity.

1.2 CONSTRUCTION WASTE (INCLUDES DEMOLITION DEBRIS/WASTE)

Divert Project construction waste and demolition debris/waste from the locallandfill as much as possible and practical given local availability of recycling capabilities and facilities, with a goal of 60 percent by weight diverted from the landfill. Follow applicable industry standards in the management of waste. Apply sound environmental principles in the management of waste. (1) Practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction waste and demolition debris/waste from landfills and incinerators and to facilitate the recycling or reuse of excess construction materials.

1.3 CONSTRUCTION WASTE MANAGEMENT

Implement a construction waste management program for the Project. Take a pro-active, responsible role in the management of construction construction waste, recycling process, disposal of demolition debris/waste, and require all subcontractors, vendors, and suppliers to participate in the construction waste management program. Establish a process for clear tracking, and documentation of construction waste and demolition debris/waste.

1.3.1 Implementation of Construction Waste Management Program

Develop and document how the construction waste management program will be implemented in a construction waste management plan. Submit a Construction Waste Management Plan to the Contracting Officer for approval. Construction waste and demolition debris/waste materials include un-used construction materials not incorporated in the final Work, as well as demolition debris/waste materials from demolition activities or deconstruction activities. In the management of waste, consider the availability of viable markets, the condition of materials, the ability to provide material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal Project completion mandates.

1.3.2 Oversight

The Environmental Manager, as specified in Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, is responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.

1.3.3 Special Programs

Implement any special programs involving rebates or similar incentives related to recycling of construction waste and demolition debris/waste materials. Retain revenue or savings from salvaged or recycling, unless otherwise directed. Ensure firms and facilities used for recycling, reuse, and disposal are permitted for the intended use to the extent required by federal, state, and local regulations.

1.3.4 Special Instructions

Provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Projects. Designation of single source separating or commingling will be clearly marked on the containers.

1.3.5 Waste Streams

Delineate waste streams and characterization, including estimated material types and quantities of waste, in the construction waste management plan. Manage all waste streams associated with the Project. Typical waste streams are listed below. Include additional waste steams not listed:

a. Land Clearing Debris

b. Asphalt

c. Masonry and CMU

d. Concrete

e. Metals (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, bronze, etc.)

f. Wood (nails and staples allowed)

g. Glass

h. Paper

i. Plastics (PET, HDPE,PVC,LDPE,PP,PS, Other)

j. Gypsum

k. Non-hazardous paint and paint cans

l. Carpet

m. Ceiling Tiles

n. Insulation

o. Beverage Containers

1.4 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL

PROCEDURES:

SD-01 Preconstruction Submittals

Construction Waste Management Plan

Salvage Plan

SD-11 Closeout Submittals

Final Construction Waste Diversion Report

1.4.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.5 MEETINGS

Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of Work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed construction waste management plan and to develop a mutual understanding relative to the management of the construction waste management program and how waste diversion requirements will be met.

The requirements of this meeting may be fulfilled during the coordination and mutual Understanding meeting outlined in Section 01 45 00 QUALITY CONTROL. At a minimum, discuss and document waste management goals at following meetings:

a. Pre-bid meeting.

b. Preconstruction meeting.

c. Regular Quality Control meetings.

d. Work safety meeting (if applicable).

1.6 SALVAGE PLAN

The Government shall have first right of refusal for materials and equipment to be salvaged from the existing Area of WorkItems designated by the Contracting Officer to be salvaged remain the property of the Government. Segregate, itemize, deliver and off-load the salvaged property at the Government designated storage area located within 10 miles of the Project Site.</

Provide a salvage plan, listing material and equipment to be salvaged, and their storage location. Maintain property control records for material or equipment designated as salvage. Use a system of property control that is approved by the Contracting Officer. Store and protect salvaged materials and equipment until disposition by the Contracting Officer.</

1.7 CONSTRUCTION WASTE MANAGEMENT PLAN

Submit Construction Waste Management Plan within 45 calendar days after Contract Award. Revise and resubmit Construction Waste Management Plan until it receives final approval from the Contracting Officer, in order for construction to begin. Execute demolition or deconstruction activities in accordance with Section 02 41 00 DEMOLITION AND DECONSTRUCTION. Manage demolition debris/waste or deconstruction materials in accordance with the approved construction waste management plan.

An approved construction waste management plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting Project cumulative waste diversion requirement. Ensure all subcontractors receive a copy of the approved Construction Waste Management Plan. The plan demonstrates how to meet the Project waste diversion requirement. Also, include the following in the plan:

a. Identify the names of individuals responsible for waste management and waste management tracking, along with roles and responsibilities on the Project.

b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.

c. Description of the regular meetings to be held to address waste management.

d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on-site and equipment to be used for processing, sorting, and temporary storage of materials.

e. Name of landfill and/or incinerator to be used.

f. Identification of local and regional re-use programs, including non-profit organizations such as schools, local housing agencies, and organization that accept used materials such as material exchange networks and resale stores. Include the name, location, phone number for each re-use facility identified, and provide a copy of the permit or license for each facility.

g. List of specific materials, by type and quantity, that will be salvaged for resale, salvaged and reused on the current Project, salvaged and stored for reuse on a future Project, or recycled. Identify the recycling facilities by name, address, and phone number.

h. Identification of materials that cannot be recycled or reused with an explanation or justification, to be approved by the Contracting Officer.

i. Description of the means by which any materials identified in item (g) above will be protected from contamination.

j. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the Project Site).

k. Copy of training plan for subcontractors and other services to prevent contamination by co-mingling materials identified for diversion and waste materials.

1.8 RECORDS (DOCUMENTATION)

1.8.1 General

Maintain records to document the types and quantities of waste generated and diverted though re-use, recycling and/or sale to third parties; through disposal to a landfill or incinerator facility. Provide explanations for any materials not recycled, reused or sold. Collect and retain manifests, weight tickets, sales receipts, and invoices specifically identifying diverted Project waste materials or disposed materials. Quantities may be measured by weight or by volume, but must be consistent throughout. List each type of waste separately noting the disposal or diversion date. Identify the landfill, recycling center, waste processor, or other organization used to process or receive the solid waste. Provide explanations for any waste not recycled or reused. With each application for payment, submit updated documentation for solid waste disposal and diversion, and submit manifests, weight tickets, receipts, and invoices specifically identifying the Project and waste material.

Demolition accomplished by other parties on this Project Site count toward the Project's total waste diversion. cumulative score for LEED BD+C and for sustainability requirements. Information on the quantity and disposition of these materials will be provided by the Contracting Officer. Include this data in records, annotated to indicate that it was accomplished by another party.

1.8.2 Accumulated

Maintain a running record of materials generated and diverted from landfill disposal, including accumulated diversion rates for the Project. Make records available to the Contracting Officer during construction or incidental demolition activities. Provide a copy of the diversion records to the Contracting Officer upon completion of the construction, incidental demolitions or minor deconstruction activities.

1.9 FINAL CONSTRUCTION WASTE DIVERSION REPORT

A Final Construction Waste Diversion Report is required at the end of the Project. Keep records in accordance with the LEED GBDC Ref Guide and using the LEED BD+C Letter Template. Provide Final Construction Waste Diversion Report 60 days prior to the Beneficial Occupancy Date (BOD).

1.10 COLLECTION

Collect, store, protect, and handle reusable and recyclable materials at the Project Site in a manner which prevents contamination, and provides protection from the elements to preserve their usefulness and monetary value. Provide receptacles and storage areas designated specifically for recyclable and reusable materials and label them clearly and appropriately to prevent contamination from other waste materials. Keep receptacles or storage areas neat and clean.

Train subcontractors and other service providers to either separate waste streams or use the co-mingling method as described in the construction waste management plan. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS and Section 02 81 00 TRANSPORTATION AND DISPOSAL OF HAZARDOUS MATERIALS. Separate materials by one of the following methods described herein:

1.10.1 Source Separation Method

Separate waste products and materials that are recyclable from trash and sort as described below into appropriately marked separate containers and then transport to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the category types as defined in the construction waste management plan.

1.10.2 Other Methods

Other methods proposed by the Contractor may be used when approved by the Contracting Officer.

1.11 DISPOSAL

All existing materials which are to be removed, and are not indicated or specified for reuse in the new Work, shall, unless otherwise specified, become the property of the Contractor, be removed from Government property at the Contractor's expense, and be disposed of in accordance with Federal, State and local regulations. Remove all salvage from Government property.

Excess clean soils excavated from the Project Site, and NOT reused in the construction shall be disposed off of U.S. Coast Guard property. For contaminated or potentially contaminated soils, see Sections 01 35 13.10 SPECIAL PROJECT PROCEDURES FOR CONTAMINATED SITES and 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS.

Excess concrete and asphalt materials shall be disposed of off U.S. Coast Guard property.

Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures as described in the waste management plan. Except as otherwise specified in other Sections of the Specifications, dispose of in accordance with the following:

1.11.1 Reuse

Give first consideration to reusing construction and demolition materials as a disposition strategy. Recover for reuse materials, products, and components as described in the approved construction waste management plan. Coordinate with the Contracting Officer to identify on-site reuse opportunities or material sales or donation available through Government resale or donation programs. Sale of recovered materials is not allowed on the Installation.

1.11.2 Recycle

Recycle non-hazardous construction and demolition/debris materials that are not suitable for reuse. Track rejection of contaminated recyclable materials by the recycling facility. Rejected recyclables materials will not be counted as a percentage of diversion calculation. Recycle all fluorescent lamps, HID lamps, mercury (Hg) -containing thermostats and ampoules, and PCBs-containing ballasts and electrical components as directed by the Contracting Officer. Do not crush lamps on-site as this creates a hazardous waste stream with additional handling requirements.

1.11.3 Waste

Dispose by landfill or incineration only those waste materials with no practical use, economic benefit, or recycling opportunity.

1.11.4 Return

Set aside and protect misdelivered and substandard products and materials and return to supplier for credit.

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used. -- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS
11/21

PART 1 GENERAL

1.1 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM E1971	(2005; R 2011) Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR 52.243-4	Changes
FAR 52.246-21	Warranty of Construction

1.2 DEFINITIONS

1.2.1 U.S. Coast Guard Warranty Representative

The U.S. Coast Guard Warranty Representative is the U.S. Coast Guard's point of contact who can request a service/warranty call from the Service Warranty Manager.

1.2.2 Emergency

Under this section, emergency is defined as a failure of a component which will cause a safety hazard or cause increasing damage to facility if not immediately corrected.

1.2.3 Routine Response

Loss of operation, or malfunction causing reduced operability of installed equipment.

1.2.4 Warranty Manager

The Warranty Manager is the Contractor's approved point of contact who will be responsible for all management and implementation of Warranty Work during the warranty phase of this Contract.

1.2.5 Warranty Technician

The Warranty Technician is the Contractor's technician or service Contractor capable and equipped to repair the warranty item. Commercial providers may be used for specialized equipment, and are defined as those companies providing similar commercial services and authorized to provide such services by the by the equipment manufacturers.

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Warranty Management Plan

Warranty Tags

Final Cleaning

Spare Parts Data

SD-08 Manufacturer's Instructions

Posted Instructions

SD-10 Operation and Maintenance Data

Operation and Maintenance Manuals

SD-11 Closeout Submittals

Warranty List

As-Built Drawings

Record Drawings

Equipment Enrollment Forms (EFF)

Final Approved Shop Drawings

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 SPARE PARTS DATA

Submit two copies of the Spare Parts Data list.

a. Indicate manufacturer's name, part number, nomenclature, and stock level required for maintenance and repair. List those items that may be standard to the normal maintenance of the system.

1.5 WARRANTY MANAGEMENT

1.5.1 General Requirements

This Section includes responsibilities in addition to the requirements of Contract Clause FAR 52.246-21, Warranty of Construction and any other extended warranty called for, or extended as a normal part of commercial product practice. The intent of this section is to provide a Warranty program to ensure specific components provided in this Contract will function optimally for their useful design life as defined by the manufacturers and keep their warranties intact. All other manufacturer's extended warranties shall be extended in behalf of the Government, with documentation provided to the Government.

Applicability:

The Contractor shall provide all product warranties as indicated in the individual technical Specification sections. Product warranties shall be obtained directly from the manufacturer or vendor. Such warranties shall be in written format, either standard warranties issued with the product or a letter signed by an official with the authority to so obligate the manufacturer.

Effective Date:

The effective date of product warranties shall be based on the date products are approved for payment by the Contracting Officer. The Contractor shall accurately record the delivery of all materials to the Project Site on the Contract Daily Report. The effective date of product warranties shall be based on the date products are accepted by the Contracting Officer. Normally, this will occur at final acceptance, unless the Government takes earlier use and possession. Progress payment for materials delivered on-site does not imply acceptance.

1.5.2 Warranty Management Plan

Develop a warranty management plan which contains information relevant to FAR 52.246-21 Warranty of Construction in Sitka, Alaska. At least 30 days before the planned pre-warranty conference, submit one set of the warranty management plan. Include within the warranty management plan all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan must be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this Contract. The term "status" as indicated below must include due date and whether item has been submitted or was accomplished. Warranty information made available during the construction phase must be submitted to the Contracting Officer for approval prior to each monthly pay estimate.

Assemble approved information in a binder and turn over to the Government upon acceptance of the Work. The construction warranty period will begin on the date of Project acceptance and continue for the full product warranty period.

Warranty Manager and Warranty Technician shall schedule and meet with U.S. Coast Guard representatives 4 months and 9 months from the date of

acceptance. The visit is unrelated to warranty call outs, and must be met whether or not the Warranty Manager or Technician has already been on-site. During this on-site visit the Contracting Officer, Base Warranty Representative and the Warranty Manager and Warranty Technician will discuss warranty performance over the previous months. The discussion will include a Site walk, and thorough inspection.

The warranty management plan shall include, but is not limited to the following:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the Contractors, subcontractors, manufacturers or suppliers involved.

b. Furnish with each warranty the name, address, and telephone number of each of the guarantor's representatives nearest to the Project location.

c. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

d. A list for each warranted equipment, item, feature of construction or system indicating:

(1) Name of item.

(2) Model and serial numbers.

(3) Location where installed.

(4) Name and phone numbers of manufacturers or suppliers.

(5) Names, addresses and telephone numbers of sources of spare parts.

(6) Warranties and terms of warranty. Include one-year overall warranty of construction, including the starting date of warranty of construction. Items which have extended warranties must be indicated with separate warranty expiration dates.

(7) Cross-reference to warranty certificates as applicable.

(8) Starting point and duration of warranty period.

(9) Summary of maintenance procedures required to continue the warranty in force.

(10) Cross-reference to specific pertinent Operation and Maintenance manuals.

(11) Organization, names and phone numbers of persons to call for warranty service.

(12) Typical response time and repair time expected for various warranted equipment.

e. The plans for attendance at the 4 and 9 month post-construction warranty inspections conducted by the Government.

f. Procedure and status of tagging of all equipment covered by extended warranties.

g. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

1.5.3 Performance Bond

The Performance Bond must remain effective throughout the construction period .

a. In the event the Contractor fails to commence and diligently pursue any construction Warranty Work required, the Contracting Officer will have the Work performed by others, and after completion of the Work, will charge the remaining construction warranty funds of expenses incurred by the Government while performing the Work, including, but not limited to administrative expenses.

b. In the event sufficient funds are not available to cover the construction Warranty Work performed by the Government at the Contractor's expense, the Contracting Officer will have the right to recoup expenses from the bonding company.

c. Following oral or written notification of required Construction Warranty Repair Work, respond in a timely manner. Written verification will follow oral instructions. Failure to respond will be cause for the Contracting Officer to proceed against the Contractor.

1.5.4 Pre-Warranty Conference

Prior to Contract completion, and at a time designated by the Contracting Officer, meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this section. Communication procedures for Contractor notification of construction warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty will be established/reviewed at this meeting. In connection with these requirements and at the time of the Contractor's quality control completion inspection, furnish the name, telephone number and address of a licensed and bonded company which is authorized to initiate and pursue Construction Warranty Work action on behalf of the Contractor. This point of contact will be located within the local service area of the warranted construction, be continuously available, and be responsive to Government inquiry on Warranty Work action and status. This requirement does not relieve the Contractor of any of its responsibilities in connection with other portions of this provision.

1.5.5 Contractor's Response to Construction Warranty Service Requirements

All equipment labor and materials required to perform the warranty phase of this Contract is part of the base bid. The Schedule of Prices shall include the cost of the warranty phase of this Contract. This is not an addition to the Contract award price, it is a portion of the award price that must be allocated to cover the warranty phase of this Contract.

The Warranty Manager must respond by phone to coordinate response within the following times:

Emergency warranty call: By phone: 24 hour or less.

Routine: 48 hours or less

The Warranty Technician must respond on-site within the following time periods to restore or stabilize the situation:

Emergency warranty call: 24 hours or less. (An emergency may be downgraded to Routine, after initial response and stabilization.)

Routine: 48 hours or less

Permanent repairs: To be determined

Responsibility for Repairs: It is the responsibility of the Warranty Manager or approved representative to identify the problem and arrange for repairs, including any additional damage related to the problem.

Determination of warranty call authenticity shall be withheld until an on-site response has occurred. The Contractor shall pursue the resolution of the warranty call. The time frames specified above must be complied with and will not be extended pending resolution of whether or not a problem is a warranty issue.

The Warranty Manager shall notify the Contracting Officer immediately upon preliminary determination that the problem reported is not a legitimate warranty call. The Contracting Officer will make the final determination in all cases as to the legitimacy of the warranty call. The Contractor may submit a request for equitable adjustment under FAR 52.243-4, Changes.

Maintain and submit monthly a warranty call log to the Contracting Officer. Identify date, time, nature and resolution of warranty call.

If the Contractor fails to correct latent defects or major discrepancies in workmanship or products during the warranty period, the Government maintains the right to adjust the Contract price accordingly, or to correct the Work by a third party and recover costs for such activities from the Contractor's performance bond.

1.5.6 Warranty Tags

At the time of installation, tag each warranted item with a durable, oil and water resistant tag approved by the Contracting Officer. Attach each tag with a copper wire and spray with a silicone waterproof coating. Also, submit two record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature must remain blank until the Project is accepted for beneficial occupancy. Show the following information on the tag.

Type of product/material	
Model number	

Serial number	
Contract number	
Warranty period from/to	
Inspector's signature	
Construction Contractor	
Address	
Telephone number	
Warranty contact	
Address	
Telephone number	
Warranty response time priority code	
WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.	

1.5.7 Warranty List

In addition to the submittals listed above, submit a complete Warranty List within 14 calendar days of completion of the Punch List by the Contracting Officer.

The Warranty List shall include the approved names for Warranty Manager and Technicians with address, phone and FAX numbers, and the start date/end date of the warranty period.

Provide four copies of the list to the Contracting Officer on 8-1/2 x 11 inch paper, heavily laminated.

PART 2 PRODUCTS

2.1 GOVERNMENT FURNISHED MATERIALS (GFM)

The Government will provide two sets of full size Drawings at the preconstruction conference.

2.2 SYSTEM DESCRIPTION

Prepare all required CAD Drawing files in accordance with Section 01 33 16 DESIGN DATA AFTER AWARD.

PART 3 EXECUTION

3.1 AS-BUILT DRAWINGS

The As-Built Drawings shall be a record of the construction as installed and completed by the Contractor. The Contractor shall markup two sets of full size Drawings to show the as-built conditions. These as-built marked prints shall be kept current and available at all times at the Project Site. One copy shall be maintained by, and remain in the possession of, the Contractor. The second copy shall be maintained by the Contractor, but shall remain in the possession of the Contracting Officer.

All changes from the Contract plans, which are made in the Work, or additional information which might be uncovered in the course of construction, shall be accurately and neatly recorded as they occur, by means of details and notes. No construction Work shall be concealed until it has been inspected, approved and recorded.

The as-built marked prints shall be submitted for joint inspection for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of the monthly pay estimate. Two sets of up-to-date as-built marked prints shall be delivered to the Contracting Officer at the time of final inspection for Government review, approval, and retention.

3.1.1 Markup Guidelines

Make comments and markup the Drawings complete without reference to letters, memos, or materials that are not part of the As-Built Drawing. Show what was changed, how it was changed, where item(s) were relocated and change related details. These working as-built markup prints must be neat, legible and accurate as follows:

a. Use base colors of red, green, and blue. Color code for changes as follows:

   (1) Special (Blue) - Items requiring special information, coordination, or special detailing or detailing notes.

   (2) Deletions (Red) - Over-strike deleted graphic items (lines), lettering in notes and leaders.

   (3) Additions (Green) - Added items, lettering in notes and leaders.

b. Provide a legend if colors other than the "base" colors of red, green, and blue are used.

c. Add and denote any additional equipment or material facilities, service lines, incorporated under As-Built Revisions if not already shown in legend.

d. Use frequent written explanations on markup Drawings to describe changes. Do not totally rely on graphic means to convey the revision.

e. Use legible lettering and precise and clear digital values when marking prints. Clarify ambiguities concerning the nature and application of change involved.

f. Wherever a revision is made, also make changes to related section views, details, legend, profiles, plans and elevation views, schedules, notes and call out designations, and mark accordingly to avoid conflicting data on all other sheets.

g. For deletions, cross out all features, data and captions that relate to that revision.

h. For changes on small-scale Drawings and in restricted areas, provide large-scale inserts, with leaders to the applicable location.

i. Indicate one of the following when attaching a print or sketch to a markup print:

1) An entire Drawing has been added to the Contract Drawings.

2) The Contract Drawing(s) has been updated to show the change.

3) Provided for reference only to further detail the initial design.

j. Incorporate all Shop and Fabrication Drawings into the markup Drawings.

3.1.2 As-Built Drawings Content

The As-Built Drawings shall show the following information, but not be limited thereto:

a. All of the information shown on the set of Drawings.

b. A record of all deviations, modifications or changes from those Drawings, however minor, which were incorporated in the Work.

c. All additional Work not appearing on the Contract Drawings.

d. The location and dimensions of any changes to the Site, within the building, or within the structure.

e. Changes in details of design or additional information obtained from submissions specified to be prepared and/or furnished by the Contractor; including but not limited to Shop Drawings, fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

f. The topography, invert elevations and grades of drainage installed or affected as part of the Project construction.

g. All changes, Revisions, and/or Modifications which result from the final inspection.

h. Where Contract Drawings or Specifications present options, show only the option selected for construction on the working as-built markup Drawings.

i. If borrow material for this Project is from sources on Government property, or if Government property is used as a spoil area, furnish a

contour map of the final borrow pit/spoil area elevations.

j. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.

3.2 RECORD DRAWINGS

The Contractor shall aid in the preparation of final Record Drawings with the AE Design firm who will provide Construction Contract Support Services to the government under a separate contract. Coordinate with the AE after the completion of each definable feature of Work as listed in the Contractor Quality Control Plan (Foundations, Utilities, Structural Steel, etc., as appropriate for the Project). The AE will transfer the changes from the approved working As-Built Markup Drawings to the original electronic CAD Drawing filesto correctly show the features of the Project as-built by bringing the working CAD Drawing set into agreement with approved working As-Built Markup Drawings, and adding such additional Drawings as may be necessary.

Jointly review the working As-Built Markup Drawings with printouts from working As-Built CAD Drawing PDF files for accuracy and completeness. Monthly review of working As-Built CAD Drawing PDF file printouts must cover all sheets revised since the previous review. These PDF Drawing files are part of the permanent records of this Project. Any Drawings damaged or lost must be satisfactorily replaced at no expense to the Government.

3.3 Final Approved Shop Drawings

Provide 2 copies of complete final approved shop drawings on 2 separate CDs or DVDs 30 days after date of final acceptance. Organize final approved shop drawings in separate subfolders clearly labeled with the approved submittal number and title.

3.4 OPERATION AND MAINTENANCE MANUALS

Provide Project operation and maintenance manuals as specified in Section 01 78 23 OPERATION AND MAINTENANCE MANUALS DATA. Provide four electronic copies of the Operation and Maintenance Manual files. Submit to the Contracting Officer for approval within 60 calendar days of the Beneficial Occupancy Date (BOD). Update and resubmit files for final approval at BOD.

3.5 EQUIPMENT ENROLLMENT FORMS (EFF)

Contractor shall provide final Equipment Enrollment Forms in accordance with Section 01 78 23 OPERATION AND MAINTENANCE DATA as part of the Project close-out procedure.

3.6 CLEANUP

Provide final cleaning in accordance with ASTM E1971 and submit two copies of the listing of completed final clean-up items. Leave premises "broom clean." Use only nonhazardous cleaning materials, including natural cleaning materials, in the final cleanup. Clean interior and exterior glass surfaces exposed to view; remove temporary labels, stains and

foreign substances; polish transparent and glossy surfaces; vacuum carpeted and soft surfaces. Clean equipment and fixtures to a sanitary condition. Replace filters of operating equipment. Clean debris from roofs, gutters, downspouts and drainage systems. Sweep paved areas and rake clean landscaped areas. Remove waste and surplus materials, rubbish and construction facilities from the Site. Dispose, recycle, salvage, and return construction and demolition waste from Project in accordance with Section 01 57 19 TEMPORARY ENVIRONMENTAL CONTROLS, and 01 74 19 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT.

3.6.1 Extraordinary Cleanup Requirements

The following cleanup requirements apply: See sections: .

-- End of Section --

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SECTION 01 78 23

OPERATION AND MAINTENANCE DATA
11/21

PART 1 GENERAL

1.1 WORK COVERED

This Section covers the Contractor's responsibility to prepare and provide Operations and Maintenance (O&M) documentation, equipment enrollment information, and comprehensive training on new utility and operational systems. The information and documentation provided under this Section will assist the U.S. Coast Guard with its Facilities Preventive Maintenance Program (FPMP). This Section also covers documentation requirements for equipment that is removed or demolished as part of the Work.

Provide equipment enrollment documentation, O&M Manuals, posted operating instructions, nameplates, valve tags, and training of U.S. Coast Guard personnel upon completion of each phase or stage of Projects that are constructed in phases or stages.

At a minimum, the requirements of this Section apply when the Work involves any of the following items:

a. HVAC systems

b. Electrical Systems

c. Fire alarm systems

d. Fire suppression systems

e. Water systems

f. Compressed air and piping systems

g. Steam systems

g. Carpet or flooring

h. Battery systems

i. Any machinery or equipment installed as part of this Contract

NOTE: Until such time of both Beneficial Occupancy Date and Government acceptance of all equipment enrollment documentation, training, and approved O&M manuals, the Contractor shall provide all required maintenance on equipment, systems, components and machinery provided under this Contract at no additional cost to the Government.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM E1557	(2009; R 2015) Standard Classification for Building Elements and Related Sitework - UNIFORMAT II
ASTM E1971	(2005; R 2011) Standard Guide for Stewardship for the Cleaning of Commercial and Institutional Buildings

RSMeans (RSM)

RSM FMRCD	(2019) Facilities Maintenance & Repair Costs with RSMeans Data

1.3 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-10 Operation and Maintenance Data

Draft O&M Manual

Corrected O&M Manual

Final O&M Manual

Training Plan

Training Outline

Training Content

Equipment Enrollment Form

SD-11 Closeout Submittals

Training Video Recording

Validation of Training Completion

1.3.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.4 OPERATION AND MAINTENANCE DATA

Submit Operation and Maintenance (O&M) Data for the provided equipment, product, or system, defining the importance of system interactions, troubleshooting, and long-term preventive operation and maintenance. Compile, prepare, and aggregate O&M data to include clarifying and updating the original sequences of operation to as-built conditions. Organize and present information in sufficient detail to clearly explain

O&M requirements at the system, equipment, component, and subassembly level. Include an index preceding each submittal. Submit in accordance with this Section and Section 01 33 00 SUBMITTAL PROCEDURES.

1.4.1 Package Quality

Documents must be fully legible. Operation and Maintenance data must be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions.

Equipment model provided shall be indicated on all schedules, charts and lists along with accessories provided. Inapplicable information on accessories not provided or unrelated manufacturer's equipment shall be removed or crossed out if on the same page as applicable information. All non-English language sections shall be removed unless on the same page as English sections. All references to individual equipment shall reference it's tag number as identified in the Drawings and on the associated Equipment Enrollment Form. Correlate identification of equipment with nomenclature used on plans, e.g., FCU-1 (fan coil unit-1), etc.

1.4.2 Package Content

Provide data package content in accordance with paragraph SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES. Comply with the data package requirements specified in the individual Technical Sections, including the content of the packages and addressing each product, component, and system designated for data package submission. Use Data Package 5 for commissioned items without a specified data package requirement in the individual Technical Sections.

1.4.3 Changes to Submittals

Provide manufacturer-originated changes or revisions to submitted data if a component of an item is so affected subsequent to acceptance of the O&M Data. Submit changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data within 30 calendar days of the notification of this change requirement.

1.4.4 Commissioning Authority Review and Approval

Submit the commissioned systems and equipment submittals to the Commissioning Authority (CxA) to review for completeness and applicability. Obtain validation from the CxA that the systems and equipment provided meet the requirements of the Contract documents and design intent, particularly as they relate to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local environmental impacts. The CxA communicates deficiencies to the Contracting Officer. Submit the O&M manuals to the Contracting Officer upon a successful review of the corrections, and with the CxA recommendation for approval and acceptance of these O&M manuals. This Work is in addition to the normal review procedures for O&M data.

1.5 TYPES OF INFORMATION REQUIRED IN O&M DATA PACKAGES

The following are detailed descriptions of the data package items listed in paragraph SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES.

1.5.1 Operating Instructions

Make reference to nameplate data, valve numbers, manufacturers' literature, schematics, Drawings, and other parts of the manual to help personnel understand the procedures. Provide specific instructions, procedures, and illustrations for all phases of operation for the installed model and features of each system.

1.5.1.1 Narrative

Describe the function of each system or piece of equipment. Provide the manufacturer's printed description. Include equipment model number, characteristics (e.g., BTU, GPM, head, horsepower, voltage, etc.), and equipment nameplate symbol.

1.5.1.2 Safety Precautions and Hazards

List personnel hazards and equipment or product safety precautions for operating conditions. List all residual hazards identified in the Activity Hazard Analysis provided under Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS. Provide recommended safeguards for each identified hazard.

1.5.1.3 Operator Prestart

Provide procedures required to install, set up, and prepare each system for use.

1.5.1.4 Startup, Shutdown, and Post-Shutdown Procedures

Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.5.1.5 Normal Operations

Provide Control Diagrams with data to explain operation and control of systems and specific equipment. Provide narrative description of Normal Operating Procedures.

1.5.1.6 Emergency Operations

Provide Emergency Procedures for equipment malfunctions to permit a short period of continued operation or to shut down the equipment to prevent further damage to systems and equipment. Provide Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency operation of utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.5.1.7 Operator Service Requirements

Provide instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gauge readings.

1.5.1.8 Environmental Conditions

Provide a list of Environmental Conditions (temperature, humidity, and other relevant data) that are best suited for the operation of each product, component or system. Describe conditions under which the item and/or equipment should not be allowed to run.

1.5.1.9 Operating Log

If required by code, regulations, Contract Documents, or Contracting Officer, provide forms, sample logs, and instructions for maintaining necessary operating records.

1.5.1.10 Additional Requirements for HVAC Control Systems

Provide Data Package 5 and the following for control systems:

a. Narrative description on how to perform and apply functions, features, modes, and other operations, including unoccupied operation, seasonal changeover, manual operation, and alarms. Include detailed technical manual for programming and customizing control loops and algorithms.

b. Full as-built sequence of operations.

c. Copies of checkout tests and calibrations performed by the Contractor (not Commissioning tests).

d. Full points list. Provide a listing of rooms with the following information for each room:

(1) Floor

(2) Room number

(3) Room name

(4) Air handler unit ID

(5) Reference Drawing Number

(6) Air terminal unit tag ID

(7) Heating or cooling valve tag ID

(8) Minimum cfm

(9) Maximum cfm

e. Full print out of all schedules and set points after testing and acceptance of the system.

f. Full as-built print out of software program.

g. Marking of system sensors and thermostats on the as-built floor plan and Mechanical Drawings with their control system designations.

1.5.2 Preventive Maintenance

For each piece of equipment including batteries, describe routine maintenance to be performed and the maintenance interval in daily or weekly time frames to the maximum extent possible. Some equipment (e.g., generators) will require the maintenance interval to be provided in service hours (e.g., 1,000 hours), but this should be avoided unless required otherwise by code, regulations, Contract Documents, or Contracting Officer (e.g., generators). Develop a maintenance schedule

reflecting these intervals based on manufacturer's written data. In a separate subsection, provide overhaul instructions for equipment that can be overhauled. Provide manufacturers' detailed instructions if available.

Provide the following information for preventive and scheduled maintenance to minimize repairs for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.5.2.1 Preventive Maintenance Plan, Schedule, and Procedures

Provide manufacturer's schedule for routine preventive maintenance, inspections, condition monitoring (predictive tests), and adjustments required to ensure proper and economical operation and to minimize repairs. Provide instructions stating when the systems should be retested. Include manufacturer's projection of preventive maintenance work-hours on a daily, weekly, monthly, and annual basis including craft requirements by type of craft. For periodic calibrations, provide manufacturer's specified frequency and procedures for each separate operation.

Define the anticipated time required to perform each test (work-hours), necessary test apparatus, number of personnel identified by responsibility, and a testing validation procedure permitting the record operation capability requirements within the schedule. Provide a remarks column for the testing validation procedure referencing operating limits of time, pressure, temperature, volume, voltage, current, acceleration, velocity, alignment, calibration, adjustments, cleaning, or special system notes. Delineate procedures for preventive maintenance, inspection, adjustment, lubrication and cleaning necessary to minimize repairs.

1.5.2.2 Lubrication Data

Include the following preventive maintenance lubrication data, in addition to instructions for lubrication required under paragraph OPERATOR SERVICE REQUIREMENTS:

a. A table showing recommended lubricants for specific temperature ranges and applications.

b. Charts with a schematic diagram of the equipment showing lubrication points, recommended types and grades of lubricants, and capacities.

1.5.2.3 Testing and Performance Data

Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms. Provide final set points.

1.5.2.4 Cleaning Recommendations

Provide environmentally preferable cleaning recommendations in accordance with ASTM E1971.

1.5.3 Repair

Provide manufacturer's recommended procedures and instructions for correcting problems and making repairs for the installed model and features of each system. Include potential environmental and indoor air

quality impacts of recommended maintenance procedures and materials.

1.5.3.1 Troubleshooting Guides and Diagnostic Techniques

Provide step-by-step procedures to promptly isolate the cause of typical malfunctions. Describe clearly why the checkout is performed and what conditions are to be sought. Identify tests or inspections and test equipment required to determine whether parts and equipment may be reused or require replacement.

1.5.3.2 Drawings, Diagrams, and Charts

Provide point-to-point Drawings of wiring and control circuits including factory-field interfaces. Provide a complete and accurate depiction of the actual job specific wiring and control Work. On diagrams, number electrical and electronic wiring and pneumatic control tubing and the terminals for each type, identically to actual installation configuration and numbering.

1.5.3.2.1 Mechanical

Provide piping and duct diagrams and schematics for HVAC, plumbing, fuel, and compressed air systems showing all equipment, valves and controls. Identify equipment by nameplate symbol. Identify valves by valve tag number with normal or seasonal operating positions indicated. Provide half-size scaled Drawings of complete systems with each individual system highlighted in contrasting colors with system color identification chart.

Provide wiring diagrams of HVAC systems electrical power and temperature controls. Ensure operation of the temperature controls is identified in the operating instructions.

1.5.3.2.2 Electrical

Provide wiring diagrams and schematics of all electrical systems, emergency generator and transfer switch systems, fire detection and alarm systems, intrusion detection and alarm systems, public address systems, telephone systems, cable TV systems, computer systems and major pieces of equipment.

1.5.3.3 Repair Procedures

Provide instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

Repair procedures must inform operators how to check out, troubleshoot, repair, and replace components of the system. Include electrical and mechanical schematics and diagrams and diagnostic techniques necessary to enable operation and troubleshooting of the system after acceptance.

1.5.3.4 Removal and Replacement Instructions

Provide step-by-step procedures and a list of required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Use a combination of text and illustrations.

1.5.3.5 Spare Parts and Supply Lists

Provide lists of spare parts and supplies, including part numbers and sources of supply, required for repair to ensure continued service or operation without unreasonable delays. Special consideration is required for facilities at remote locations. List spare parts and supplies that have a long lead-time to obtain.

For all pieces of equipment provide a complete list of manufacturer's recommended spare parts as well as special tools or instruments needed to perform routine maintenance. Special tools required shall be provided with the equipment at time of installation.

1.5.3.6 Repair Work-Hours

Provide manufacturer's projection of repair work-hours including requirements by type of craft. Identify, and tabulate separately, repair that requires the equipment manufacturer to complete or to participate.

1.5.4 Appendices

Provide information required below and information not specified in the preceding paragraphs but pertinent to the maintenance or operation of the product or equipment. Include the following:

1.5.4.1 Product Submittal Data

Provide a copy of SD-03 Product Data submittals documented with the required approval.

1.5.4.2 Manufacturer's Instructions

Provide a copy of SD-08 Manufacturer's Instructions submittals documented with the required approval.

1.5.4.3 O&M Submittal Data

Provide a copy of SD-10 Operation and Maintenance Data submittals documented with the required approval.

1.5.4.4 Motor Data

Identify each motor and provide voltage rating, code letter, full load amperes, horsepower, speed, service factor, duty and type.

1.5.4.5 Battery Data

Provide charging instructions and maintenance information (e.g., with normal and abnormal reading) of:

a. Voltages

b. Currents (charging and float)

c. Specific gravity

1.5.4.6 Parts Identification

Provide identification and coverage for the parts of each component,

assembly, subassembly, and accessory of the end items subject to replacement. Include special hardware requirements, such as requirement to use high-strength bolts and nuts. Identify parts by make, model, serial number, and source of supply to allow reordering without further identification. Provide clear and legible illustrations, Drawings, and exploded views to enable easy identification of the items. When illustrations omit the part numbers and description, both the illustrations and separate listing must show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Group the parts shown in the listings by components, assemblies, and subassemblies in accordance with the manufacturer's standard practice. Parts data may cover more than one model or series of equipment, components, assemblies, subassemblies, attachments, or accessories, such as typically shown in a master parts catalog.

1.5.4.7 Warranty Information

List and explain the various warranties and clearly identify the servicing and technical precautions prescribed by the manufacturers' or Contract Documents in order to keep warranties in force. Include warranty information for primary componentsof the system. Provide copies of warranties required by Section 01 78 00 CLOSEOUT SUBMITTALS.

Consolidate manufacturer's warranty data for all applicable equipment or components into a reference table. The reference table should be inserted as a separate section in the front of the O&M manual deliverable, or provided as an appendix to the O&M deliverable. This reference table should be organized and sorted by Uniformat II Level 2 systems and should include the following fields for each component or piece of equipment:

a. Equipment/Component Description

b. Building Name

c. Location Number

d. Quantity or Size + UOM (Unit of Measure)

e. Installation Date

f. Manufacturer

g. Model Number

h. Serial Number

i. Manufacturer Warranty end date

j. Equipment Tag Number

1.5.4.8 Extended Warranty Information

In addition to the above requirements for warranty data, list all warranties for products, equipment, components, and sub-components whose duration exceeds one year. For each warranty listed, indicate the applicable Specification Section, duration, start date, end date, and the point of contact for warranty fulfillment. Also, list or reference the specific operation and maintenance procedures that must be performed to keep the warranty valid. Provide copies of warranties required by Section

01 78 00 CLOSEOUT SUBMITTALS.

1.5.4.9 Personnel Training Requirements

Provide information available from the manufacturers that is needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.5.4.10 Testing Equipment and Special Tool Information

Include information on test equipment required to perform specified tests and on special tools needed for the operation, maintenance, and repair of components. Provide final set points.

1.5.4.11 Field Test Reports

Provide a copy of Field Test Reports (SD-06) submittals documented with the required approval.

1.5.4.12 Contractor Information

Provide a list that includes the name, address, and telephone number of the General Contractor and each subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturers' representative and service organization that can provide replacements most convenient to the Project Site. Provide the name, address, and telephone number of the product, equipment, and system manufacturers.

1.6 SCHEDULE OF OPERATION AND MAINTENANCE DATA PACKAGES

Provide the O&M Data Packages specified in individual Technical Sections. The information required in each type of data package follows:

1.6.1 Data Package 1

a. Narrative

b. Safety precautions and hazards

c. Cleaning recommendations

d. Preventive maintenance plan, schedule, and procedures

e. Repair Procedures

f. Product Submittal data

g. Warranty information

h. Extended warranty information

i. Contractor information

j. Spare parts and supply list

1.6.2 Data Package 2

a. Narrative

b. Safety precautions and hazards

c. Normal operations

d. Environmental conditions

e. Lubrication data

f. Preventive maintenance plan, schedule, and procedures

g. Cleaning recommendations

h. Repair procedures

i. Removal and replacement instructions

j. Spare parts and supply list

k. Product submittal data

l. Motor data

m. Battery data

n. Parts identification

o. Warranty information

p. Extended warranty information

q. Contractor information

1.6.3 Data Package 3

a. Narrative

b. Safety precautions and hazards

c. Operator prestart

d. Startup, shutdown, and post-shutdown procedures

e. Normal operations

f. Emergency operations

g. Environmental conditions

h. Operating log

i. Lubrication data

j. Preventive maintenance plan, schedule, and procedures

k. Cleaning recommendations

l. Troubleshooting guides and diagnostic techniques

m. Drawings, diagrams, and charts including all wiring diagrams and control diagrams

n. Repair procedures

o. Removal and replacement instructions

p. Spare parts and supply list

q. Product submittal data

r. O&M submittal data

s. Motor data

t. Battery data

u. Parts identification

v. Warranty information

w. Extended warranty information

x. Testing equipment and special tool information

y. Testing and performance data

z. Contractor information

aa. Field test reports

ab. Additional requirements for HVAC Control Systems

1.6.4 Data Package 4

a. Narrative

b. Safety precautions and hazards

c. Operator prestart

d. Startup, shutdown, and post-shutdown procedures

e. Normal operations

f. Emergency operations

g. Operator service requirements

h. Environmental conditions

i. Operating log

j. Lubrication data

k. Preventive maintenance plan, schedule, and procedures

l. Cleaning recommendations

m. Troubleshooting guides and diagnostic techniques

n. Drawings, diagrams, and charts including all wiring diagrams and control diagrams

o. Repair procedures

p. Removal and replacement instructions

q. Motor Data

r. Battery Data

s. Spare parts and supply list

t. Repair work-hours

u. Product submittal data

v. O&M submittal data

w. Parts identification

x. Warranty information

y. Extended warranty information

z. Personnel training requirements

aa. Testing equipment and special tool information

ab. Testing and performance data

ac. Contractor information

ad. Field test reports

ae. Additional requirements for HVAC control systems

1.6.5 Data Package 5

a. Narrative

b. Safety precautions and hazards

c. Operator prestart

d. Start-up, shutdown, and post-shutdown procedures

e. Normal operations

f. Environmental conditions

g. Preventive maintenance plan, schedule, and procedures

h. Troubleshooting guides and diagnostic techniques

i. Drawings, diagrams, and charts including all wiring diagrams and control diagrams

j. Repair procedures

k. Removal and replacement instructions

l. Spare parts and supply list

m. Product submittal data

n. Manufacturer's instructions

o. O&M submittal data

p. Parts identification

q. Testing equipment and special tool information

r. Warranty information

s. Extended warranty information

t. Testing and performance data

u. Contractor information

v. Field test reports

w. Additional requirements for HVAC control systems (where required)

x. Emergency operations (where applicable)

y. Battery Data

1.7 OPERATION AND MAINTENANCE MANUALS

Assemble data packages into electronic and hard copy Operation and Maintenance Manuals.

The manual shall be a one-point reference source for U.S. Coast Guard personnel and maintenance Contractors to operate and maintain the systems and equipment listed in the Specification Sections. Prepared text and instructions shall be written in modern English and prepared at the appropriate grade level reading ease for the intended O&M audience. Compile the manual using the equipment manufacturers' data along with supplemental instructions and Drawings prepared by or on behalf of the Contractor. Supplemental instructions shall include a complete description of the system operation along with step-by-step procedures for start-up, shut down, seasonal changes, and dealing with emergency situations. Include tables indicating any set points and Drawings indicating location of equipment, valves, etc. as described below.

1.7.1 Draft O&M Manual

Submit draft electronic copies of the O&M Manual 14 days prior to any testing or inspection as follows:

a. Submit one copy for review by the Contracting Officer.

b. Submit one copy for review by the and correction by the Contractor.

During equipment start-up/testing, compare actual operating procedures to those stated in the manual; revise manual as needed.

1.7.2 Corrected O&M Manual

Submit corrected electronic and hard copies of the O&M Manual at time of final inspection as follows:

a. Submit one copy to the Contracting Officer for information only.

b. Submit two copies for verifcation by the .

Comments and one copy of the manual will be returned by the to the Contractor for final correction.

1.7.3 Final O&M Manual

Submit final electronic and hard copies of the O&M Manual 14 days after receipt of Corrected O&M Manual review comments as follows:

a. Submit one copy to the Contracting Officer for information only.

b. Submit two copies for verifcation by the .

The will either approve the Final O&M Manuals or provide comments and return one copy of the manual to the Contractor for additional corrections. In addition, copies of the Final O&M Manuals shall be available during training. If corrections are necessary, repeat the Final O&M submittal process as outlined above. After final approval, the Contractor shall provide one electronic and two hard copies of the approved, Final O&M Manuals.

1.7.4 Organization

1.7.4.1 Hard Copies

Arrange the manual so there is a separate chapter for each Uniformat II level. Then subdivide each chapter into sections that provide the required information for each system or piece of equipment.

Manuals shall be in vinyl-covered three ring binders sized for 8.5 inches by 11 inches pages. Provide a title page and table of contents. For each chapter provide hard paper tab dividers with chapter title or equipment name printed on the faces and tabs. Drawings included in the manual shall be trifolded 11 inches by 17 inches pages. On the spine and front cover of the manual, print, in lines that are horizontal when the manual is upright on a shelf:

Operation and Maintenance Manual
Building Name
Title of Project
Revision and Date

1.7.4.2 Electronic Copies

Assemble each manual into a composite electronically indexed file using the most current version of Adobe Acrobat or similar software capable of producing PDF file format. Provide compact disks (CD) or data digital

versatile disk (DVD) as appropriate, so that each one contains operation, maintenance and record files, Project record documents, and training videos as required. Include a complete electronically linked operation and maintenance directory.

PDF files, including cut sheets and Drawings, shall provide fully searchable text. Include a separate disk, organized in the same structure as the primary O&M disk, with (wherever possible) the native file formats (.doc, .dwg, etc.) used to prepare the PDF's included in the O&M Manual. Preventive Maintenance and other Tables shall be prepared using a standard format such as Microsoft Word or Excel, and shall not be scanned from manufacturer data.

Bookmark Product and Drawing Information documents using Uniformat II levels, and arrange submittals using the Project Specification Section numbers as a structure. Use Uniformat II numbers along with descriptive bookmarked titles that explain the content of the information that is being bookmarked.

1.8 CONTROL SOFTWARE

Provide a copy of all programmable inputs on a CD in a protective case. Include CD with final set points of all control software and the control software in each copy of the O&M manual and also attach a copy of the software to the piece of equipment the program is installed on. At a minimum provide programming copies (backup) for Fire alarm/control, HVAC, security, and access control systems provided under this Contract. After the Government is provided a final approved commissioning report and the Project is determined to be substantially complete, the Contractor shall ensure that the U.S. Coast Guard will have the software administrative rights to make any necessary operational adjustments on all access control systems (e.g., HVAC DDC (Direct Digital Controls), Fire alarm, security, etc).

Provide the following information on the disk label and disk holder or case:

a. Building Number

b. Project Title

c. Activity and Location

d. Construction Contract Number

e. Prepared For: (Contracting Agency)

f. Prepared By: (Name, title, phone number and email address)

g. Include the disk content on the disk label

h. Date

i. Virus scanning program used

1.9 EQUIPMENT ENROLLMENT

The Contractor shall record enrollment-eligible equipment and/or systems that are inststalled or decommissioned as part of the Work. Record this

information on a Government-provided Excel Spreadsheet. The Government will take the Contractor supplied information and input it into the U.S. Coast Guard Shore Asset Management (SAM) system.

1.9.1 Equipment Enrollment Catalog

The U.S. Coast Guard Approved Equipment Enrollment Catalog is provided as "Attachment 3 - U.S. Coast Guard Equipment Enrollment Catalog," to these Specifications. This catalog is the most current list of equipment and systems with maintenance requirements that are electronically tracked in the SAM database. The catalog serves the following purposes:

a. Catagorizes the equipment that the U.S. Coast Guard maintains in accordance with the building element clasifications outlined in ASTM E1557 at the level UNIFORMAT II, Level 4 format.

b. Assigns Preventive Maintenance Procedures to the equipment per the RSM FMRCD (RSMeans "Facilities Maintenance And Repair Cost Data") publication.

c. Assigns the SAM "Job Plan" to the respective RSMeans Preventive Maintenance Procedure in a one-to-one database context.

1.9.2 Equipment Enrollment Form

For each contractual piece of equipment provided, installed, or decomissioned, the Contractor shall reference the Equipment Enrollment Catalog in order to fill out the Equipment Enrollment Form. The Equipment Enrollment Form Excel spreadsheet will be provided by the Contracting Officer. A sample form is provided as "Attachment 4 - Example Enrollment Form" to these Specifications for reference.

Only equipment from a single SAM building number is allowed on each individual Equipment Enrollment Form. Contractor shall request a listing of Project related SAM building numbers. Allow the U.S. Coast Guard 14 days to provide a listing of all SAM building numbers.

1.9.3 Format

Submit one electronic copy of the Excel file for each building. Note that U.S. Coast Guard will complete data entry into SAM utilizing Contractor's electronic Excel file.

PART 2 PRODUCTS

2.1 NAMEPLATES

Unless otherwise specified in the Specifications, provide minimum 3/4 inch by 2-1/2 inch by 1/8 inch thick black laminated plastic nameplates with 3/8 inch high white block lettering for the equipment and systems specified in other Sections. Nameplates shall be lettered with the following:

a. Item ID name or symbol shown on Drawings

b. Capacity or size if not on manufacturer's nameplate

c. For monitoring and measuring equipment such as meters, gages, and thermometers, nameplate shall also identify what is being measured.

For example, the nameplate for thermometer No. 1 in a hot water supply line shall indicate "Thermometer No. 1 - HWS" or similar wording.

Contractor shall provide a Draft of all nameplates text for U.S. Coast Guard approval prior to final ordering of nameplates.

2.2 VALVE TAGS

Provide stainless steel valve tags for all valves. For Projects where tags will be installed in marine, industrial, or other highly corrosive environments, provide 316 grade stainless steel valve tags. Secure tags with beaded chains or other means acceptable to the Contracting Officer. Provide a valve chart that identifies each valve, its function, and the system of which it is a part. Frame one copy of the valve chart under plastic and wall-mount in the Mechanical Room. Provide another copy of the valve chart in the O&M Manual.

PART 3 EXECUTION

3.1 POSTING OF OPERATING INSTRUCTIONS

Provide and post operating instructions and valve line-ups for the equipment and systems as specified in the Contract Drawings and Specifications. Include start up, adjustment, operation, shutdown, safety-precautions, and other items of instruction necessary for safe operation.

Unless otherwise specified in the RFP Contract Specifications, the instructions shall be typed or printed, framed under plastic, and posted next to the equipment. Instructions exposed to the weather shall be made weather tight. Safety precautions shall be "double-struck, boldface" red print to draw attention to the precautions. The minimum size of these instructions shall be 11 inches by 17 inches.

3.2 TRAINING

Prior to acceptance of the facility by the Contracting Officer for Beneficial Occupancy, provide comprehensive training for the systems and equipment specified in the technical Specifications. The Contractor shall provide training to U.S. Coast Guard personnel on how to operate and maintain each piece of equipment or system installed in this Project. The training must be targeted for the building maintenance personnel, and applicable building occupants and facility partner(s).

Equipment and systems training shall include the following at a minimum, as applicable:

a. Fire alarm and suppression systems

b. HVAC equipment and HVAC controls

c. Plumbing systems and plumbing controls

d. Burnerss and burner controls

e. Electrical systems

f. Telecommunication systems

g. Control systems

Provide certified instructors for training purposes to applicable U.S. Coast Guard personnel. Instructors must be well-versed in the particular systems that they are presenting.

Training shall be conducted at the Project Site. Only one system shall have instruction at a time. At a minimum assume 8 hours of training for each system installed. If the system is more complicated provide additional training as required to meet the intended purpose to train U.S. Coast Guard personnel. The instruction sessions shall be recorded on DVD and two copies shall be provided to the Contracting Officer.

Provide final approved applicable O&M manuals to attendees for training for each item (minimum 4 copies per training session).

3.2.1 Training Plan

Submit a written training plan to the Contracting Officer for approval at least 60 calendar days prior to the scheduled training. Training shall be coordinated to occur as part of the last day or two of the U.S. Coast Guard final inspection and prior to building acceptance. Training plan must be approved by the Quality Control Manager (QC)Commissioning Authority (CxA) prior to forwarding to the Contracting Officer. Also, coordinate the training schedule with the Contracting Officer and Quality Control ManagerCxA. Include within the plan the following elements:

a. Equipment included in training

b. Intended audience

c. Location of training

d. Dates of training

e. Objectives

f. Outline of the information to be presented and subjects covered including description

g. Start and finish times and duration of training on each subject

h. Methods (e.g., classroom lecture, video, Site walk-through, actual operational demonstrations, written handouts)

i. Instructor names and instructor qualifications for each subject

j. List of texts and other materials to be furnished by the Contractor that are required to support training

k. Description of proposed software to be used for video recording of training sessions.

3.2.2 Training Content

Address aspects of the Operation and Maintenance Manual submitted in accordance with Section 01 78 00 CLOSEOUT SUBMITTALS.

Instructions/training shall be for the applicable duration and shall focus on the operation, troubleshooting, maintenance, and adjustment of the systems and equipment specified in the Contract Drawings and Specifications.

The core of this training must be based on manufacturer's recommendations and the operation and maintenance information. The QCCxA is responsible for overseeing and approving the content and adequacy of the training. Spend 95 percent of the instruction time during the presentation on the OPERATION AND MAINTENANCE DATA. Include the following for each system training presentation:

a. Operator prestart

b. Startup, shutdown, and post-shutdown procedures

c. Normal operations

d. Emergency operations

e. Unoccupied operation, seasonal changeover, manual operation, controls set-up and programming

f. Relevant health and safety issues and precautions

g. Operator service requirements

h. Review of wiring and control Drawings and schematics

i. Troubleshooting, troubleshooting guides, diagnostic techniques, and alarms

j. Parts identification

k. Spare parts and supply list

l. Special maintenance and replacement sources

m. Lubrication data

n. Preventive maintenance plan and schedule

o. Maintenance and repair procedures

p. Corrective maintenance man-hours

q. Testing equipment & special tool information

r. Environmental conditions including a discussion of how the feature or system is environmentally responsive. Advise adjustments and optimizing methods for energy conservation.

s. Design intent.

t. Use of O&M Manual Files.

u. Interactions with other systems.

v. Tenant interaction issues.

w. Removal and replacement instructions

x. Warranty certificate and information

y. Personnel training requirements

3.2.3 Training Outline

Provide the Operation and Maintenance Manual Files (Bookmarked PDF) and a written course outline listing the major and minor topics to be discussed by the instructor on each day of the course to each trainee in the course. Provide the course outline 14 calendar days prior to the training.

3.2.4 Training Video Recording

Record classroom training session(s) on video. Provide to the Contracting Officer two copies of the training session(s) in DVD video recording format. All training videos shall be in a preapproved media player file format. Capture within the recording, in video and audio, the instructors' training presentations including question and answer periods with the attendees. The recording camera(s) must be attended by a person during the recording sessions to assure proper size of exhibits and projections during the recording are visible and readable when viewed as training.

3.2.5 Unresolved Questions from Attendees

If, at the end of the training course, there are questions from attendees that remain unresolved, the instructor must send the answers, in writing, to the Contracting Officer for transmittal to the attendees, and the training video must be modified to include the appropriate clarifications.

3.2.6 Validation of Training Completion

Ensure that each attendee at each training session signs a class roster daily to confirm Government participation in the training. At the completion of training, submit a signed validation letter that includes a sample record of training for reporting what systems were included in the training, who provided the training, when and where the training was performed, and copies of the signed class rosters. Provide two copies of the validation to the Contracting Officer, and one copy to the Operation and Maintenance Manual Preparer for inclusion into the Manual's documentation.

3.2.7 Quality Control Coordination

Coordinate this training with the QCCxA in accordance with Section 01 45 00 QUALITY CONTROL.

-- End of Section --

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SECTION 01 91 00

TOTAL BUILDING COMMISSIONING
11/21

PART 1 GENERAL

1.1 SUMMARY

Commission the building systems listed herein. Employ the services of an independent Commissioning Firm. The Commissioning Firm must be a 1st tier subcontractor of the General or Prime Contractor and must be financially and corporately independent of all other subcontractors. The Commissioning Firm must employ a Lead Commissioning Specialist that coordinates all aspects of the commissioning process. Conform to the commissioning procedures outlined in this Specification.

1.2 SYSTEMS TO BE COMMISSIONED

Commission the following systems:

Heating, Ventilating, Air Conditioning, and Refrigeration Systems (HVAC)
Building Automation System
Lighting Systems
Power Distribution Systems
Plumbing Systems
Natural Gas and Propane Systems
Compressed Air and Vacuum Systems

1.3 REFERENCES

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

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 180	(2012) Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems
ASHRAE 202	(2018) Commissioning Process for Buildings and Systems

ASSOCIATED AIR BALANCE COUNCIL (AABC)

ACG Commissioning Guideline	(2005) Commissioning Guideline

NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB)

NEBB Commissioning Standard	(2009) Procedural Standards for Whole Building Systems Commissioning of New Construction; 3rd Edition

SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION (SMACNA)

ANSI/SMACNA 014	(2013) HVAC Systems Commissioning Manual, 2nd Edition

1.4 COMMUNICATION WITH THE GOVERNMENT

The Lead Commissioning Specialist (CxC) must submit all plans, schedules, reports, and documentation directly to the Contracting Officer concurrent with submission to the Quality Control Manager. The Lead Commissioning Specialist must have direct communication with the Contracting Officer regarding all elements of the commissioning process; however, the Government has no direct Contract authority with the Lead Commissioning Specialist.

1.5 SEQUENCING AND SCHEDULING

1.5.1 Sequencing

Complete the following prior to starting Functional Performance Tests of mechanical systems:

a. All equipment and systems have been completed, cleaned, flushed, disinfected, calibrated, tested, and operate in accordance with Contract documents and Construction Plans and Specifications.

b. Performance Verification Tests of the controls systems have been completed and the Performance Verification Test Report has been submitted and approved in accordance with Specification Section 23 09 00 INSTRUMENTATION AND CONTROL FOR HVAC, 23 09 13 INSTRUMENTATION AND CONTROL DEVICES FOR HVAC, Section 23 09 23.02 BACNET DIRECT DIGITAL CONTROL FOR HVAC AND OTHER BUILDING CONTROL SYSTEMS.

c. Testing, Adjusting, and Balancing has been completed and the Testing, Adjusting, and Balancing Report, has been submitted and approved in accordance with Specification Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC.

d. The building envelope is enclosed according to Contract documents with final construction completed.

e. The Pre-Functional Checklists have been submitted and approved.

f. The Certificate of Readiness for mechanical systems has been submitted and approved.

Complete the following prior to starting Functional Performance Tests of the electrical systems:

a. All electrical, power generation, and lighting equipment and systems have been completed, calibrated, tested, and operate in accordance with Contract documents and Construction Plans and Specifications.

b. The building envelope is enclosed according to Contract documents with final construction completed.

c. Ceiling tiles, floor coverings, and window coverings are in place.

d. The Certificate of Readiness for electrical systems has been submitted and approved.

e. Lights have completed a minimum 24 hour burn-in period.

1.5.2 Project Schedule

Include the following tasks in the Project Schedule Baseline required by Section 01 32 16 PROJECT SCHEDULES. Ensure sufficient time is scheduled to accommodate the requirements of this Specification section. The order of items listed below is not intended to imply a specified sequence:

a. Submission and approval of the Commissioning Firm and Commissioning Specialist

b. Submission and approval of the Testing, Adjusting, and Balancing (TAB) Firm and TAB Specialist specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

e. Submission and approval of the Construction Phase Commissioning Plan

f. Installation of permanent utilities (gas, water, electric)

k. Factory Acceptance Testing for each of the systems to be commissioned as required by technical Specifications

l. Manufacturer's Equipment Start-Up for each of the systems to be commissioned.

p. Submission and approval of the TAB Schematic Drawings, Report Forms, and Procedures specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC.

q. Submission and approval of Duct Air Leakage Test Procedures specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

r. Duct Air Leakage Test Execution specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

s. Submission and approval of the Final Duct Air Leakage Test Report specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

t. Testing, Adjusting, and Balancing (TAB) Field Work required by Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

u. Submission and approval of the TAB Report specified in Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

v. TAB Field Acceptance Testing required by Section 23 05 93 TESTING, ADJUSTING, AND BALANCING FOR HVAC

w. Submission and approval of the Start-Up Testing Report specified in .

x. Submission and approval of the Performance Verification Test Procedures specified in .

y. Performance Verification Tests required by .

z. Performance Verification Test Report specified in .

aa. Pre-Functional Checklist Submittal

bb. Functional Performance Testing for each system to be commissioned

dd. Post-Test Deficiency Correction for each system to be commissioned

ee. Re-Testing

ff. Endurance Tests

gg. Training for each of the systems to be commissioned

hh. Systems Manual submission and approval

ii. Seasonal Testing

1.6 SUBMITTALS

Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Commissioning Firm

Lead Commissioning Specialist

Technical Commissioning Specialists

Commissioning Firm's Contract

SD-06 Test Reports

Design Review Report

Interim Construction Phase Commissioning Plan

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Final Commissioning Report

1.6.1 Submittal Transmittals

In accordance with Section 01 33 00 SUBMITTAL PROCEDURES, all submittals require a submittal transmittal form and all submittal transmittal forms must be signed by an authorized official of the Contractor, indicating that the Contractor has reviewed the submittal for conformance with all requirements of the Contract documents, in order to be accepted.

1.7 COMMISSIONING FIRM

Provide a Commissioning Firm that is certified in commissioning by one of the following: the AABC Commissioning Group (ACG); the National Environmental Balancing Bureau (NEBB); the International Certification Board/Testing, Adjusting, and Balancing Bureau (ICB/TABB), the Building Commissioning Association (BCA); the Association of Energy Engineers (AEE); or an ANSI/ISO/IEC 17024 accredited organization. The Commissioning Firm must be certified in all systems to be commissioned to the extent such certifications are available from the certifying body. Describe any lapses in certification or disciplinary action taken by the certifying body against the proposed Commissioning Firm or Lead Commissioning Specialist in detail. Any firm or commissioning professional that has been the subject of disciplinary action by the certifying body within the five years preceding Contract award is not eligible to perform any duties related to commissioning.

a. Submit the Commissioning Firm's certification of qualifications including the name of the firm and certifications no later than 30 calendar days after Notice to Proceed. Submit one hard copy and an electronic copy.

b. The Commissioning Firm's and Commissioning Specialists' certifications must be maintained for the entire duration of the duties specified herein. If, for any reason, the firm or a specialist loses a certification during this period, immediately notify the Contracting Officer and submit another Commissioning Firm or Commissioning Specialist for approval. All Work specified in this Specification section performed by the Commissioning Firm or associated Commissioning Specialists is invalid if the Commissioning Firm or Commissioning Specialist loses its certification prior to Contract completion and must be performed by an approved successor.

c. The Commissioning Firm must oversee and assist the General or Prime Contractor with the Work specified herein. Submit the Commissioning Firm's Contract including the Scope of Work associated with the paragraph POST-CONSTRUCTION SUPPORT no later than 30 calendar days after approval of the Commissioning Firm. Submit one hard copy and an electronic copy.

1.7.1 Lead Commissioning Specialist

The Commissioning Firm must provide a Lead Commissioning Specialist (CxC) that has a minimum of five years of commissioning experience, including two Projects of similar size and complexity, and that is one of the following: a NEBB qualified Systems Commissioning Administrator (SCA); ACG Certified Commissioning Authority (CxA); ICB/TABB Certified Commissioning Supervisor; BCA Certified Commissioning Professional (CCP); AEE Certified Building Commissioning Professional (CBCP); University of Wisconsin-Madison Qualified Commissioning Process Provider (QCxP); ASHRAE Commissioning Process Management Professional (CPMP).

a. Submit the Lead Commissioning Specialist's certification of qualifications including the name of the specialist and firm; certifications; years of experience; and a listing of representative Projects of similar size and complexity no later than 30 calendar days after Notice to Proceed. Submit one hard copy and an electronic copy.

b. The Lead Commissioning Specialists certifications must be maintained for the entire duration of the duties specified herein. If, for any reason, the specialist loses a certification during this period, immediately notify the Contracting Officer and submit another Lead Commissioning Specialist for approval. All Work specified in this Specification section to be performed by the Lead Commissioning Specialist is invalid if the Lead Commissioning Specialist loses its certification prior to Contract completion and must be performed by an approved successor.

c. The Lead Commissioning Specialist must lead and oversee the commissioning Work specified herein and be the primary point of contact for the Government regarding the commissioning Work.

1.7.2 Technical Commissioning Specialists

Technical Commissioning Specialists, employed by the Commissioning Firm and that have the following qualifications, must perform the technical Work specified herein associated with each system to be commissioned:

a. The technical Work associated with mechanical systems including Heating, Ventilating, Air Conditioning, and Refrigeration Systems; Building Automation System; ; Plumbing Systems; ; ; Compressed Air and Vacuum Systems; must be performed by a Commissioning Specialist certified by NEBB, ACG, ICB/TABB, AEE, University of Wisconsin-Madison, ASHRAE, or BCA in the commissioning of HVAC systems with five years of experience in the commissioning of HVAC systems.

b. The technical Work associated with electrical systems including Lighting Systems; Power Distribution Systems; ; must be performed by an engineering technician certified by the International Electrical Testing Association (NETA) or the National Institute for Certification in Engineering Technologies (NICET) with five years of experience inspecting, testing, and calibrating electrical distribution and generation equipment, systems, and devices.

c. Submit the Technical Commissioning Specialist's certification of qualifications including the name of the specialist and firm;

certifications; years of experience; and a listing of representative Projects of similar size and complexity no later than 30 calendar days after Notice to Proceed. Submit one hard copy and an electronic copy.

1.7.3 Commissioning Standard

Comply with the requirements of the commissioning standard under which the Commissioning Firm and Specialists qualifications are approved. When the firm and specialists are certified by BCA, AEE, ASHRAE, or the University of Wisconsin-Madison, comply with the requirements of one of the acceptable standards unless otherwise stated herein. The acceptable standards are ACG Commissioning Guideline, NEBB Commissioning Standard, ANSI/SMACNA 014, or ASHRAE 202. Comply with applicable NETA and NICET testing standards for electrical systems.

a. Implement all recommendations and suggested practices contained in the Commissioning Standard and electrical test standards.

b. Use the Commissioning Standard for all aspects of Commissioning, including calibration of instruments.

c. Where the instrument manufacturer calibration recommendations are more stringent than those listed in the Commissioning Standard, adhere to the manufacturer calibration recommendations.

d. All quality control provisions of the Commissioning Standard such as performance guarantees are part of this Contract.

e. The Commissioning Specialists must develop commissioning procedures for any systems or system components not covered in the Commissioning Standard.

f. Use any new requirements, recommendations, and procedures published or adopted prior to Contract solicitation by the body responsible for the Commissioning Standard.

1.8 GOVERNMENT ACCEPTANCE ENGINEER

A Government Acceptance Engineer will perform many of the Government Quality Assurance functions for the Project including review of select submittals, plans, procedures, and reports and inspection and testing of systems. The Government Acceptance Engineer will participate in TAB Field Acceptance Testing and Performance Verification Tests. Coordinate submittal transmission and testing schedules with the Contracting Officer and the Government Acceptance Engineer.

1.9 ISSUES LOG

The Lead Commissioning Specialist must develop and maintain an Issues Log for tracking and resolution of all deficiencies discovered through commissioning review, inspection, and testing. Include the date of final resolution of issues as confirmed by the Commissioning Specialist. Submit the Issues Log to the Contracting Officer on a monthly basis at a minimum, and provide an electronic copy to the Government Acceptance Engineer concurrently. At any point during construction, any commissioning team member finding deficiencies may communicate those deficiencies in writing to the Commissioning Specialist for inclusion into the Issues Log.

Track construction deficiencies identified in the Issues Log in accordance

with the Contractor Quality Control Plan required by Specification Section 01 45 00 QUALITY CONTROL.

1.10 CERTIFICATE OF READINESS

Prior to scheduling Functional Performance Tests for each system, issue a Certificate of Readiness for the system certifying that the system is ready for Functional Performance Testing. The Certificate of Readiness must include, for each system to be commissioned, all equipment and system start-up reports; completed Pre-Functional Checklists; Testing, Adjusting, and Balancing (TAB) Report; HVAC Controls Start-Up Reports to the extent applicable to the system. The Contractor; the Lead Commissioning Specialist; the Contractor's Quality Control Representative; the Mechanical, Electrical, Controls, and TAB subcontractor representatives must sign and date the Certificate of Readiness. Submit the Certificate of Readiness for each system no later than 14 calendar days prior to Functional Performance Tests of that system. Submit one hard copy and an electronic copy. Do not schedule Functional Performance Tests for a system until the Certificate of Readiness for that system receives approval by the Government.

PART 2 PRODUCTS

Not used

PART 3 EXECUTION

3.1 CONSTRUCTION PHASE

3.1.1 Construction Commissioning Coordination Meeting

The Lead Commissioning Specialist must lead a Construction Commissioning Coordination Meeting no later than to discuss the commissioning process including Contract requirements, lines of communication, roles and responsibilities, schedules, documentation requirements, inspection and test procedures, and logistics as specified in this Specification section. The Contractor's Superintendent or Project Manager, the Contractor's Quality Control Representative, and the Government must attend this meeting. Invite the User and Base Facility Engineers and a Public Works Representative, to attend this meeting.

3.1.2 Construction Phase Commissioning Plan

3.1.2.1 Interim Construction Phase Commissioning Plan

The Lead Commissioning Specialist (CxC) must prepare the Interim Construction Phase Commissioning Plan. Submit the Interim Construction Phase Commissioning Plan no later than 30 calendar days after the Construction Commissioning Coordination Meeting and no later than 14 days prior to the start of construction of the building envelope. Submit one hard copy and an electronic copy.

Identify the commissioning and testing standards and outline the overall commissioning process, the commissioning schedule, the commissioning team members and responsibilities, lines of communication, documentation requirements for the construction phase of the Project in the Interim Construction Phase Commissioning Plan.

3.1.2.1.1 Checklists

Download example Pre-Functional Checklists, and Functional Performance Test Checklists for Specification section 01 91 00 TOTAL BUILDING COMMISSIONING at the following location: http://www.wbdg.org/FFC/NAVGRAPH/graphtoc.pdf. The checklists submitted in the Interim and Final Construction Phase Commissioning Plans must contain the same level of detail shown in the examples. The submitted checklists are not required to match the format of the examples.

3.1.2.1.2 Contents

3.1.2.2 Final Construction Phase Commissioning Plan

The Lead Commissioning Specialist (CxC) must prepare the Final Construction Phase Commissioning Plan. Submit the Final Construction Phase Commissioning Plan no later than 30 calendar days prior to the start of Pre-Functional Checks. Submit one hard copy and an electronic copy.Once approved, file the approved plan in the Sustainability eNotebook.

Include the information provided in the Interim Construction Phase Commissioning Plan. In addition, the Technical Commissioning Specialist must develop the Pre-Functional Checklists, and Functional Performance Test Checklists for each building, for each system required to be commissioned, and for each component for inclusion in the Final Construction Phase Commissioning Plan.

3.1.2.2.1 Pre-Functional Checklists

The Pre-Functional Checklists must include items for physical inspection or testing that demonstrate that installation and start-up of equipment and systems is complete. See paragraph Pre-Functional Checks for more information. Functional Performance test procedures must explain, step-by-step, the actions and expected results that will demonstrate that the system performs in accordance with the Contract in the Functional Performance TestChecklists. See paragraph Functional Performance Tests for more information.

3.1.2.2.2 Functional Performance Test Checklists

Functional Performance Test Checklists must include procedures that explain, step-by-step, the actions and expected results that will demonstrate that the system performs in accordance with the Contract. See paragraph Functional Performance Tests for more information. Include the following sections and details appropriate to the systems being tested in the Functional Performance Test Checklists:

a. Notable system features including information about such attributes as system sizing and controls to facilitate understanding of system operation

b. Conclusions and recommendations based on control system feature, point-to-point, actuator, and system operation observations. Conclusions must clearly indicate if system does or does not perform in accordance with Contract requirements. Recommendation must clearly

indicate that the system should or should not be accepted by the Government.

c. Test conditions including date, beginning and ending time, and beginning and ending outdoor air conditions

d. Attendees present throughout the entire system test

e. Identification of the equipment involved in the test

f. Control system feature identification including control point description, embedded/visible type, adjustable/monitoring type, actual value, and setpoint value/alarm range

g. Point-to-point observations including demonstrating system flow meters and sensors have been calibrated and are correctly displayed on the Operator Work Station

h. Actuator operation observations demonstrating actuator responses to commands from the control system

i. As-found condition of the system operation

j. List of test items with step numbers along with the corresponding feature or control operation, intended test procedure, expected system response, and pass/fail indication.

k. Space for comments for each test item.

l. System operation observations for system-based tests demonstrating each control algorithm, operation mode, and alarm condition resulting from control point(s) manipulation. System operation observations must contain the following:

(1) introduction identifying testing methodology

(2) as-found conditions prior to control point(s) manipulation

(3) clear list of test items (step numbers)

(4) control algorithm (design control sequence) segmented by unique functions

(5) intended test procedures following each segmented control algorithm identifying control point(s) required to be manipulated to initiate system response

(6) expected system response

(7) space for comments for each test item complete including resulting control signal such as 0-volts, 10-volts, active, or inactive

(8) pass or fail indication for each test item

(9) posted operating instructions, if appropriate

3.1.3 Construction Submittals

Provide all submittals associated with the systems to be commissioned, including Shop Drawings; equipment submittals; test plans, procedures, and

reports; and resubmittal's to the Commissioning Specialists. The Technical Commissioning Specialist must review the submittals to the extent necessary verify that the equipment and system installation will comply with the Contract requirements and the requirements of the Basis of Design and the Owner's Project Requirements.

3.1.4 Inspection and Testing

Demonstrate that all system components have been installed, that each control device and item of equipment operates, and that the systems operate and perform, including interactive operation between systems, in accordance with Contract documents and the Owner's Project Requirements. Requirements in related Specification sections are independent from the requirements of this section and do not satisfy any of the requirements specified in this Specification section. Provide all materials, services, and labor required to perform the Pre-Functional Checks and Functional Performance Tests.

3.1.4.1 Commissioning Team

Provide a commissioning representative for each subcontractor associated with the systems to be commissioned. Each commissioning representative is responsible for coordination of their respective subcontractor's execution of the commissioning activities and participation in the inspection and testing required by this Specification section. The Designers listed below are the Designers of Record for their respective systems. Substitutes must be approved by the Contracting Officer.

3.1.4.1.1 Mechanical System Pre-Functional Checks Team

The following team members must participate in Pre-Functional checks of mechanical systems:

Designation	Function
CxM	Mechanical System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
MC	Contractor's Mechanical Commissioning Representative
EC	Contractor's Electrical Commissioning Representative
CC	Contractor's Controls Commissioning Representative
TABC	Contractor's TAB Commissioning Representative
PC	Contractor's Plumbing Commissioning Representative
IC	Contractor's Irrigation Commissioning Representative

3.1.4.1.2 Mechanical Systems Test Team

The following team members must participate in Functional Performance,

Seasonal, Testing of mechanical systems:

Designation	Function
CxM	Mechanical System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
MC	Contractor's Mechanical Commissioning Representative
EC	Contractor's Electrical Commissioning Representative
CC	Contractor's Controls Commissioning Representative
TABC	Contractor's TAB Commissioning Representative
PC	Contractor's Plumbing Commissioning Representative
IC	Contractor's Irrigation Commissioning Representative
~~[~~MD~~]~~	~~[~~Mechanical Designer~~]~~
~~[PD]~~	~~[Plumbing Designer]~~
~~[ID]~~	~~[Irrigation Designer]~~

3.1.4.1.3 Electrical System Pre-Functional Checks Team

The following team members must participate in Pre-Functional checks of electrical systems:

Designation	Function
Cx~~[~~E~~]~~	Electrical System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
EC	Contractor's Electrical Commissioning Representative

3.1.4.1.4 Electrical Systems Test Team

The following team members must participate in Functional Performance and Integrated Systems Testing of electrical systems:

Designation	Function
Cx[E]	Electrical System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
EC	Contractor's Electrical Commissioning Representative
[ED]	[Electrical Designer]

3.1.4.1.5 Electrical System Pre-Functional Checks Team

The following team members must participate in Pre-Functional checks of Electrical systems:

Designation	Function
Cx[ ]	Electrical[ ] System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
[ ]C	Contractor's Electrical[ ] Commissioning Representative

3.1.4.1.6 DDC Systems Test Team

The following team members must participate in Functional Performance and DDC Testing of DDC systems:

Designation	Function
Cx[ ]	DDC[ ] System Technical Commissioning Specialist
QAR	Contracting Officer's Quality Assurance Representative
CQC	Contractor's Quality Control Personnel
[ ]C	Contractor's DDC[ ] Commissioning Representative
[[ ]D]	[[ ] Designer]

3.1.4.1.7 Other Pre-Functional and Functional Performance Participants

The following may participate as team members during Pre-Functional Checks and Functional Performance Testing:

Designation	Function
~~[~~MX~~]~~	~~[~~Facility Maintenance Representative~~]~~
~~[~~FE~~]~~	~~[~~Facility Engineering Representative~~]~~
~~[~~PWD~~]~~	~~[~~Public Works Division Representative~~]~~
User	Using Agent's Representative

3.1.4.2 Pre-Functional Checks

Pre-Functional Checklists from the approved Final Construction Phase Commissioning Plan must be completed by the commissioning team. Complete one Pre-Functional Checklist for each individual item of equipment or system for each system required to be commissioned including, but not limited to, ductwork, piping, equipment, fixtures (lighting and plumbing), and controls. Indicate commissioning team member inspection and acceptance of each Pre-Functional Checklist item by initials. Acceptance of each Pre-Functional Checklist item by each team member indicates that item conforms to the Construction Contract requirements in their area of responsibility. Technical Commissioning Specialist acceptance of each Pre-Functional Checklist item indicates that each item has been installed correctly and in accordance with Contract documents and the Owner's Project Requirements. Submit the completed and initialed Pre-Functional Checklists no later than 7 calendar days after completion of inspection of all checklists items for each system. Submit one hard copy and an electronic copy. Include manufacturer start-up checklists associated with equipment with the submission of the Pre-Functional Checklists.

3.1.4.3 Tests

3.1.4.3.1 Functional Performance Tests

Schedule Functional Performance Tests for each system only after the Certificate of Readiness has been approved by the Government for the system. Correct all deficiencies identified through any prior review, inspection, or test activity before the start of Functional Performance Tests.

a. Technical Commissioning Specialists must lead and document all Functional Performance Tests for the systems to be commissioned with the Contractor and appropriate subcontractors performing the Functional Performance Tests. The representatives listed in the paragraph Commissioning Team must attend the tests. Abort Functional Performance Tests when any required commissioning team member is not present for the test.

3.1.4.3.1.1 Checklist

Use the Functional Performance Test Checklists from the approved Final Construction Phase Commissioning Plan to guide the Functional Performance Tests. Functional Performance Tests must be performed for each item of equipment and each system required to be commissioned and verify all sensor calibrations, control responses, safeties, interlocks, operating modes, sequences of operation, capacities, lighting levels, and all other performance requirements comply with Construction Contract regardless of

the specific items listed within the Functional Performance Test Checklists provided. Testing must progress from equipment or components to subsystems to systems to interlocks and connections between systems. The order of components and systems to be tested must be determined by the Technical Commissioning Specialists.

3.1.4.3.1.2 Acceptance

Indicate acceptance of each item of equipment and systems tested by signature of each commissioning team member for each Functional Performance Test. The Contractor's Quality Control Representative and the Technical Commissioning Specialists must indicate acceptance after the equipment and systems are free of deficiencies.

3.1.4.3.2 HVAC Test Methods

Perform Functional Performance Tests in accordance with the following:

3.1.4.3.2.1 Prior to Testing

Prior to testing operating modes, sequences of operation, interlocks, and safeties, complete control point-to-point observations, test sensor calibrations, and test actuator commands.

3.1.4.3.2.2 Simulating Conditions

Over-writing control input values through the controls system is not acceptable, unless approved by the Contracting Officer. Identify proposed exceptions in a protocol submitted to the Contracting Officer for approval. Before simulating conditions, overwriting values (if approved), or changing set-points, calibrate all sensors, transducers and devices. Below are several examples of exceptions that would be considered acceptable:

a. When varying static pressures inside ductwork can not be simulated within the duct, and where a sensor signals the controls system to initiate sequences at various duct static pressures, it is acceptable to simulate the various pressures with a Pneumatic Squeeze-Bulb Type Signaling Device with gauge temporarily attached to the sensing tube leading to the transmitter. It is not acceptable to reset the various set-points, nor to simulate an electric analog signal (unless approved as noted above).

b. Dirty filter pressure drops can be simulated using sheets of cardboard at filter face.

c. Freeze-stat safeties can be simulated by packing portion of sensor with ice.

d. High outside air temperatures can be simulated with a hair blower.

e. High entering cooling coil temperatures can be used to simulate entering cooling coil conditions.

f. Do not use signal generators to simulate sensor signals unless approved by the Contracting Officer, as noted above, for special cases.

g. Control set points can be altered. For example, to see the air conditioning compressor lockout Work at an outside air temperature

below 55 degrees F, when the outside air temperature is above 55 degrees F, temporarily change the lockout set point to be 0 degrees F above the current outside air temperature. Caution: Set points are not to be raised or lowered to a point such that damage to the components, systems, or the building structure and/or contents will occur.

h. Test duct mounted smoke detectors in accordance with the manufacturer's recommendations. Perform the tests with air system at minimum airflow condition in ductwork.

i. Test current sensing relays used for fan and pump status signals to control system to indicate unit failure and run status by resetting the set point on the relay to simulate a lost belt or unit failure while the unit is running. Confirm that the failure alarm was generated and received at the control system. After the test is conducted, return the set point to its original set-point or a set-point as indicated by the Contracting Officer.

3.1.4.3.2.3 Setup

Perform each test under conditions that simulate actual conditions as close as is practically possible. Provide all necessary materials and system modifications to produce the necessary flows, pressures, temperatures, and other conditions necessary to execute the test according to the specified conditions. At completion of the test, return the affected building equipment and systems to their pre-test condition.

3.1.4.3.3 Sample Strategy

3.1.4.3.4 Endurance Test

3.1.4.3.5 Seasonal Tests

3.1.4.3.5.1 Initial Functional Performance Tests

Perform Initial Functional Performance Tests as soon as all Contract Work is completed, regardless of the season. Develop and implement means of artificial loading to demonstrate, to a reasonable level of confidence, the ability of the HVAC systems to handle peak seasonal loads.

3.1.4.3.5.2 Full-Load Conditions

In addition to the Initial Functional Performance Tests, perform Functional Performance Tests of HVAC systems under full-load conditions during peak heating and cooling seasons during outdoor air condition design extremes.

Schedule Seasonal Functional Performance Tests in coordination with the Government.

3.1.4.3.5.3 System Acceptance

Systems may be partially accepted prior to seasonal testing if they comply with all Construction Contract that can be tested during initial Functional Performance Tests. All Functional Performance Test procedures must be completed prior to full systems acceptance.

3.1.4.3.6 Re-Testing

3.1.4.3.6.1 100 Percent Sample

Systems or equipment for which 100 percent sample size are tested fail if one or more of the test procedures results in discovery of a deficiency and the deficiency cannot be resolved within 5 minutes during the test.

Re-test to the extent necessary to confirm that the deficiencies have been corrected without negatively impacting the performance of the rest of the system.

3.1.4.3.6.2 Less than 100 Percent Sample

For systems tests with a sample size less than 100 percent, if one or more of the test procedures for an item of equipment or a system results in discovery of a deficiency, regardless of whether the deficiency is corrected during the sample tests, the item of equipment or system fails the test.

a. If the system failure rate is 5 percent or less, meaning that 5 percent or less of the equipment or systems had at least one deficiency, re-test only on the items which experienced the initial failures.

b. If the system failure rate is higher than 5 percent, meaning that more than 5 percent of equipment or systems tested had at least one deficiency, re-test the items which experienced the initial failures to the extent necessary to confirm that the deficiencies have been corrected . In addition, test another random sample of the same size as the initial sample for the first time. If the second random sample set has any failures, re-test those failed items and all remaining equipment and systems to complete 100 percent testing of that system type.

3.1.5 Training Plan

Develop a training plan which identifies all training required by Specification sections associated with commissioned systems. Include a matrix listing each training requirement, content of the training (syllabus), the trainer name, trainer contact information, and schedule and location of training. Submit one hard copy and an electronic copy of the Training Plan to the Commissioning Specialists and the Government no later than 30 calendar days prior to the associated training.

Document training attendance using training attendance rosters and provide completed attendance rosters to the Commissioning Specialists and the Government no later than 7 calendar days following the completion of training for each system to be commissioned. Submit one hard copy and an electronic copy.

3.1.6 Maintenance and Service Life Plans

3.1.6.1 Maintenance Plan

The Contractor shall prepare and submit a Maintenance Plan for the Project mechanical, electrical, plumbing, and fire protection systems. Prepare the HVAC and refrigeration sections of the Maintenance Plan in accordance with ASHRAE 180. Develop required inspection and maintenance tasks similar to Section 5 of ASHRAE 180 for the other commissioned systems and fire protection systems.

Submit the Maintenance Plan no later than 30 calendar days following the completion of Functional Performance tests. Submit three hard copies and an electronic copy.

3.1.6.2 Service Life Plan

The Contractor shall prepare and submit a Service Life Plan for the building envelope, structural systems, and Site hardscape that includes the following for each assembly or component:

a. A description of each including the materials or products.

b. The estimated service life, in years.

c. The estimated maintenance frequency and description of maintenance tasks.

d. The point of maintenance access for the components with estimated service life less than service life of the building.

Submit the Service Life Plan no later than 30 calendar days following the completion of Functional Performance tests. Submit three hard copies and an electronic copy.

3.2 COMMISSIONING REPORT

Following the completion of Functional Performance Tests, with the exception of Seasonal Tests, and following the Endurance Tests, the Lead Commissioning Specialist must prepare a Commissioning Report.

a. Include an executive summary describing the overall commissioning process, the results of the commissioning process, any outstanding deficiencies and recommended resolutions, and any seasonal testing that must be scheduled for a later date. Indicate, in the executive summary, whether the systems meet the requirements of the Construction Contract and the Owner's Project Requirements.

b. Detail any deficiencies discovered during the commissioning process and the corrective actions taken in the report. Include the completed Pre-Functional Checklists, Functional Performance Test Checklists, the Endurance Test Report, the Commissioning Plans, the Issues Log, Training Attendance Rosters, the Design Review Report, the final TAB Report.

c. Submit the Commissioning Report no later than 14 calendar days following commissioning team acceptance of all Functional Performance Tests with the exception of Seasonal Tests and following completion of the Endurance Test. Submit three hard copies and an electronic copy.

d. Following any Seasonal Tests or Post-Construction Activities, update the Final Commissioning Report to reflect any changes and resubmit. File the approved, updated, Final Commissioning Report in the Sustainability eNotebook.

3.3 POST-CONSTRUCTION SUPPORT

3.3.1 Post-Construction Endurance Test

Perform an Endurance Test in accordance with the paragraph Endurance Test in UFGS. Use the Temporary Trending Hardware, if necessary, in accordance with UFGS

The Mechanical System Commissioning Specialists must review the trend logs from the Endurance Tests to ensure that the systems have stable operation and operate as required by the Construction Contract, and the Owner's Project Requirements. The Commissioning Specialists must provide a Post-Construction Trend Log Report that identifies any deficiencies noted in operation and includes a graphical representation of the trends. Provide one Trend Log Report for the peak cooling season and one Trend Log Report for the peak heating season. Submit one hard copy and one electronic copy of the Post-Construction Trend Log Reports no later than 14 calendar days following receipt of the trend log data by the Commissioning Specialist.

3.3.2 Post-Construction Site Visit

The Commissioning Specialists must visit the Project Site concurrent with the 9 month warranty inspection to inspect building system equipment and review building operation with the building operating/maintenance staff. The Commissioning Specialists must identify any deficiency of the building systems to operate in accordance with the Contract requirements and the Owner's Project Requirements. The Commissioning Specialists must advise the Contracting Officer of any identified deficiencies and the proposed corrective action. Submit an updated commissioning report and systems manual documenting the results of the post-construction inspection.

APPENDIX A- OWNER'S PROJECT REQUIREMENTS

OWNER'S PROJECT REQUIREMENTS DOCUMENT

Project: Project, Location, PN #####

Approved:

Name	Design Agent's Representative	Date
Name	Owner's Representative	Date

OWNER'S PROJECT REQUIREMENTS DOCUMENT

Contents

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d. On-site Power Systems
    i. Quality and Reliability
    ii. Type
    iii. Automation
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e. Other Systems
    i. Quality and Reliability
    ii. Type
    iii. Automation
    iv. Flexibility
    v. Maintenance Requirements

6. Building Occupant and O&M Personnel Requirements
   a. Facility Operation
   b. UMCS (EMCS or FMCS)
   c. Occupant Training and Orientation
   d. O&M Staff Training and Orientation

1. Owner and User Requirements

a. Primary Purpose, Program, and Use

Explain the purpose, program, and use of the facility. (e.g., Training includes spaces such as weapons, medical, vehicle repair, cooking, etc.)

b. Project History

Explain the history of the Project related to design/construction (e.g., D/B/B, D/B, IDIQ, JOC, COE in-house, A/E, etc.). Explain any additional Project background that would impact energy/sustainability goals.

c. Broad Goals

i. Future Expansion: Explain goals related to potential future expansion.

ii. Flexibility: Explain goals related to flexibility for layout and use of the building. (e.g., high rate of office churn, expected frequency of renovation, etc.)

iii. Quality of Materials: Explain goals related to quality of materials. (e.g., highest quality materials, 50 yr life, 25 yr life, highest quality within budget, etc.)

iv. Construction Costs: Explain goals related to construction costs. (e.g., how low can you go, set Project amount, select simplest systems for low cost, etc.)

v. Operational Costs: Explain goals related to operational costs. (e.g., low utilities based on water and energy conservation, trade-off allowable on maintenance costs to reduce utility cost, utility cost unimportant compared to construction cost, etc.)

2. Environmental and Sustainability Goals

a. LEED/Green Globes Goal

Set LEED/Green Globes goal and explain sustainable features permissible or preferred to be incorporated. Explain relative importance of LEED/Green Globes goal within Project Scope. Indicate requirement from service or agency specific criteria and policy.

b. Other

Explain any special sustainability or environmental goals associated with the Project. Identify specific sustainability features that may be required or desired. (e.g., hydro-power, solar power, on-site water treatment, on-site water infiltration, impervious cover reduction, parking capacity, etc.)

3. Energy Efficiency Goals

a. Goals/Policy

Explain the specific Project goals and requirements regarding energy efficiency. Incorporate the requirements of UFC 1-200-02 High Performance and Sustainable Building Requirements and/or other relevant agency policies.

b. Systems and Feature Energy Impacts

Identify and explain envelope, system, or Site and building features that will be incorporated to maximize energy efficiency. Identify features that must be incorporated that will reduce or limit energy efficiency.

4. Indoor Environmental Quality Requirements

a. Space Type 1

i. Intended Use: Explain how the space will be used (e.g., classroom occasionally used as conference room).

ii. Occupancy Schedule: Describe the occupancy including number of people at various times (e.g., drill weekend-maximum capacity, weekdays-20 percent; or 0700-0900 - none, 0900-1400 - 30 people, 1400-1600 - none).

iii. Environmental Requirements: Describe the environmental requirements of the space. Include description of temperatures, humidity levels, ventilation rates, air quality, lighting levels, or any other specific parameters desired (e.g., 75 deg F, 50 percent rh, 30 fc, etc.).

iv. Occupant System Control Ability: Describe the desired level of control the occupants will have over the thermal comfort and lighting systems. (e.g., adjustable thermostat for every person, adjustable thermostat in all private offices, no adjustable thermostats, adjustable thermostat in senior rank also controlling other offices, occupancy sensors for lighting, adjustable dimming, etc.)

v. Type of Lighting: Describe the type of lighting desired (e.g., task lighting with minimal overhead, maximize daylight with dimming on overhead, accent lighting, particular fixtures, etc.).

vi. After-hour Use Accommodations: Describe whether and how often the space may be used after hours. Describe the systems that activate when an occupant uses the building after-hours. Describe the level of control of after-hour use HVAC.

(Example: Space is rarely used after-hours by few occupants. HVAC and lighting system should activate when occupants enter after-hours. The HVAC operation will be limited to that required to provide heating, A/C, and ventilation to the occupied space alone.) (Example: Space is rarely used after-hours by few occupants. Lighting and heating systems should activate. Ventilation and cooling should remain in normal after-hour operation.)

b. Space Type 2

5. Equipment and System Expectations

a. HVAC Systems

i. Quality and Reliability: Explain the level of quality and reliability required of the HVAC systems.

(Example: Equipment efficiency should meet ASHRAE 90.1 - SI and FEMP/Energy Star requirements. Due to critical nature of facility, additional redundancy in the cooling and heating systems is required, e.g., multiple chillers, boilers, and pumps.) (Example: No specific quality or reliability requirements specified. Equipment should remain serviceable over life of building or to the extent typical of the type of equipment.)

ii. Type: Explain the type of equipment desired.

(Example: Boilers should be condensing type. Use hydronic heating and cooling. Use self-contained A/C units in computer rooms.)

iii. Automation: Explain the level of automation in the HVAC System desired.

(Example: Single loop HVAC systems permissible. Use packaged controls only.) (Example: Control HVAC systems from DDC system connected to the base UMCS.) (Example: Boilers should have packaged controls connected to the DDC system.)

iv. Flexibility: Describe the desired level of flexibility of the HVAC system.

(Example: System should accommodate frequent office layout changes including private office wall movement.) (Example: Layout will remain mostly unchanged; no flexibility required.) (Example: Accommodate potential for conference and classrooms to change to offices.)

v. Maintenance Requirements: Describe the level of maintenance available or the requirements of the equipment regarding maintainability.

(Example: Equipment should be located to allow easy maintenance access. Equipment vendors or repair service should be able to respond within 24 hrs.)

b. Lighting Systems

i. Quality and Reliability: Explain the level of quality and reliability required of the lighting system controls.

(Example: The building lighting system should meet ASHRAE 90.1 - IP requirements.)

ii. Type: Explain the type of lighting or control equipment desired.

(Example: High-efficiency fluorescent lamps with high-efficiency ballasts will be specified. Indirect lighting will be used in all office and classroom spaces. Lighting foot-candle levels may be reduced to 45 foot-candles in lieu of the typical 50 foot-candles when indirect lighting is used.)

iii. Automation: Explain the level of automation in the lighting

control system desired.

(Example: Provide occupancy sensors in restrooms, corridors, and storage areas.)

iv. Flexibility: Describe the desired level of flexibility of the lighting system and control systems.

(Example: Provide dual level switching in classrooms and conference rooms.)

v. Maintenance Requirements: Describe the level of maintenance available or the requirements of the equipment regarding maintainability.

(Example:)

c. Domestic Hot Water Systems

i. Quality and Reliability: Explain the level of quality and reliability required of the domestic hot water systems.

(Example: Equipment efficiency should meet ASHRAE and FEMP/Energy Star requirements. Due to critical nature of facility, additional redundancy in the water heating systems is required, e.g., multiple hot water heaters and circulation pumps.) (Example: No specific quality or reliability requirements specified. Equipment should remain serviceable over life of building or to the extent typical of the type of equipment.)

ii. Type: Explain the type of equipment desired.

(Example: Gas-fired storage tank water heater with mixing valve for temperature control.) (Example: Instantaneous electric water heater at lavatories.) (Example: Instantaneous electric water heater with integral control system for eyewash/showers.)

iii. Automation: Explain the level of automation in the domestic hot water control system desired.

(Example: Occupancy schedule control for recirculation loop and gas burner. Connect package controls to DDC system.)

iv. Flexibility: Describe the desired level of flexibility of the domestic hot water systems.

(Example: No anticipated changes to restroom layout; no additional flexibility required.)

v. Maintenance Requirements: Describe the level of maintenance available or the requirements of the equipment regarding maintainability.

(Example: Equipment should be located to allow easy maintenance access. Equipment vendors or repair service should be able to respond within 24 hrs.)

d. On-site Power Systems

i. Quality and Reliability: Explain the level of quality and reliability required of the on-site power system.

ii. Type: Explain the type of on-site power system desired.

iii. Automation: Explain the level of automation in the on-site power system desired.

iv. Flexibility: Describe the desired level of flexibility of the on-site power system.

v. Maintenance Requirements: Describe the level of maintenance available or the requirements of the on-site power system regarding maintainability.

e. Other Systems

i. Quality and Reliability: Explain the level of quality and reliability required of the system.

ii. Type: Explain the type of system desired.

iii. Automation: Explain the level of automation in the system desired.

iv. Flexibility: Describe the desired level of flexibility of the system.

v. Maintenance Requirements: Describe the level of maintenance available or the requirements of the system regarding maintainability.

6. Building Occupant and O&M Personnel Requirements

a. Facility Operation

Describe how the facility will be operated. Who operates the facility? Who maintains the facility? Who pays the utility bills?

b. UMCS (EMCS or FMCS)

Will the building be tied to an UMCS/EMCS/FMCS? What system will be connected to? Provide information regarding connection requirements, protocols, and control, scheduling and monitoring points.

c. Occupant Training and Orientation

How much training and orientation is desired for building occupants? Will training need to be provided for all systems? To what extent do the occupants need to understand and use the systems?

d. O&M Staff Training and Orientation

How much training and orientation is desired for building occupants? Will training need to be provided for all systems? To what extent do the occupants need to understand and use the systems?

-- End of Section --

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