

**MARINE CORPS BASE CAMP PENDLETON, NAVAL WEAPONS STATION SEAL
BEACH FALLBROOK DETACHMENT, MARINE CORPS AIR STATION MIRAMAR,
AND MARINE CORPS RECRUIT DEPOT SAN DIEGO, CA**

PART III

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SEAL BEACH FALLBROOK DETACHMENT, MARINE
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MARINE CORPS BASE CAMP PENDLETON AND NAVAL WEAPONS STATION SEAL BEACH FALLBROOK DETACHMENT, MARINE CORPS AIR STATION MIRAMAR AND MARINE CORPS RECRUIT DEPOT SAN DIEGO, CA

238990 JOC SPECIALTY TRADE CONTRACTORS

GENERAL REQUIREMENTS

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SUMMARY OF WORK

01/08

PART 1 GENERAL

1.1 The purpose of this Job Order Contract (JOC) is for the Contractor to provide multi-trade construction services from concept to close-out.

1.1.1 This JOC is assigned NAICS Code 238990, "All Other Specialty Trade Contractors". This industry comprises establishments primarily engaged in specialized trades to include new work, additions, alterations, maintenance, and repairs.

1.1.2 The work will be located at MCB Camp Pendleton, CA, and Naval Weapons Station Seal Beach, Fallbrook Detachment, CA. The Contractor will be required to perform sustainment, modernization, and repair of various types of facilities, to include but not limited to, wood, concrete, masonry and metal constructed facilities and structures.

1.1.2.1 The Contractor will be issued work that provides sustainment, modernization and repairs of commercial facilities to include but are not limited to, administrative buildings, barrack, industrial buildings (vehicle maintenance facilities), parking structures, armories, educational/training centers, sports fields, hangers, auditoriums, theaters, recreational facilities, hotels, restaurants, religious buildings, retail and shopping centers, hospital and clinics, historical buildings and museums, swimming facilities, correctional custody facilities, etc.

1.1.2.2 The Contractor will be issued work that includes specialized trade work that encompasses, when combined, no more than three trades performing work on a single project. Work will be limited to interior and exterior work on existing building shells and within the footprint of the building lot. Work may include sustainment and repair of building interiors and exteriors which may involve wall finishes, flooring of all types, glazing, concrete and masonry, plumbing, mechanical, electrical, electronic and control systems, communication systems, IT systems, fire protection/suppression systems, security systems, exterior grounds improvements, minor earthwork, facility service utilities, etc.

1.1.2.3 Sustainment, modernization, and repairs which are considered integral to the functionality of a facility shall extend out to the immediate area that is adjacent to the facility footprint.

1.1.2.4 Abatement of asbestos containing materials (ACM), lead based paint (LBP) and mold may be required to be performed by the Contractor as part of the sustainment, modernization, and repair of a facility or its components.

1.1.3 As part of the awarded coefficient, the Contractor shall provide all contract management, key personnel, administration, planning and estimating, supervision, quality control management, site safety and health management, environmental protection management, labor, training, field office administration, vehicles, office supplies and equipment, reports, and other incidental functions and work to necessary to successfully perform the requirements as specified herein.

1.1.3.1 The cost for the key personnel requirements as specified herein are included in the awarded coefficient. However, when the Government requires additional full time key personnel to be assigned on a task order project site full time, then the cost per hour per key person required to be on the task order project site full time will be negotiated by the Government and Contractor. The first task order where a key person or key persons are negotiated shall establish cost per hour for each key person thereafter.

1.1.4 All work shall comply with Federal, State of California, San Diego County, Marine Corps Base Camp Pendleton, Naval Weapons Station Seal Beach Fallbrook Detachment, Marine Corps Air Station Miramar, Marine Corps Recruit Depot San Diego, and other local regulations and laws. The Contractor is held responsible for knowing and understanding the regulations and laws as applicable to the types of work that will be performed during the performance periods of this contract.

1.1.5 The Contractor shall be responsible for understanding and following all specifications, standards and applicable codes, to include industry standards and practices and manufacturer's recommended installation instructions as applicable to the awarded work that will be performed during the performance periods of this contract. The following specifications, standards and code references are adopted into the contract specifications herein:

- Unified Facilities Guide Specifications (UFGS); All Divisions. The Contractor can access the UFGS's at: https://www.wbdg.org/ccb/browse_cat.php?c=3.
- Master Plans for each respective Activity
- Camp Pendleton Requirements (CPR) 2012 (applicable to MCBCP only)
- Base Exterior Architectural Plan (BEAP) for each respective Activity
- National Electric Code, NFPA 70 (2014)
- International Building Code (2012)
- International Plumbing Code (2012)
- International Mechanical Code (2012)
- Unified Facilities Criteria (UFC)

Unified Facilities Criteria (UFC)

a. The Contractor can access the UFC's at: http://www.wbdg.org/ccb/browse_cat.php?c=4

- UFC 1 200 01 General Building Requirements
- UFC 1 200 02 High Performance and Sustainable Building Requirements
- UFC 1 900 01 Selection of Methods for the Reduction, Reuse and Recycling of Demolition Waste
- UFC 3 101 01 Architecture
- UFC 3 110 03 Roofing
- UFC 3 110 04 Roofing Maintenance and Repair
- UFC 3 120 10 Interior Design
- UFC 3 190 06 Protective Coatings and Paints
- UFC 3 201 02 Landscape Architecture
- UFC 3 220 06 Grouting Methods and Equipment
- UFC 3 220 10n Soil Mechanics
- UFC 3 230 02 Operations and Maintenance: Water Supply Systems
- UFC 3 240 02 Domestic Wastewater Treatment

- UFC 3 40101 Mechanical Engineering
- UFC 3 410 01 Heating, Ventilating, and Air Conditioning Systems
- UFC 3 410 02 Lonworks (R) Direct Digital Control for HVAC and Other Local Building Systems
- UFC 3 410 04n Industrial Ventilation
- UFC 3 420 01 Plumbing Systems
- UFC 3 420 02fa Compressed Air
- UFC 3 430 01fa Heating and Cooling Distribution Systems
- UFC 3 430 09 Exterior Mechanical Utility Distribution
- UFC 3 430 11 Boiler Control Systems
- UFC 3 440 04n Solar Heating of Buildings and Domestic Hot Water
- UFC 3 450 01 Noise and Vibration Control
- UFC 3 501 01 Electrical Engineering
- UFC 3 520 01 Interior Electrical Systems
- UFC 3 520 05 Stationary Battery Areas
- UFC 3 530 01 Design Interior and Exterior Lighting and Controls
- UFC 3 540 04n Diesel Electric Generating Plants
- UFC 3 555 01n 400 Hertz Medium Voltage Conversion, Distribution and Low Voltage Utilization Systems
- UFC 3 560 01 Electrical Safety, Operations and Maintenance
- UFC 3 570 02a Cathodic Protection
- UFC 3 570 02n Electrical Engineering Cathodic Protection
- UFC 3 570 06 Operations and Maintenance: Cathodic Protection Systems
- UFC 3 575 01 Lightning and Static Electricity Protection Systems
- UFC 3 580 01 Telecommunications Building Cabling Systems Planning and Design
- UFC 3 580 10 Navy and Marine Corps Intranet (NMCI) Standard Construction Practices
- UFC 3 600 01 Fire Protection Engineering for Facilities
- UFC 3 601 02 Operations and Maintenance Inspection, Testing and Maintenance of Fire protection Systems
- UFC 4 010 01 DoD Minimum Antiterrorism Standards for Buildings
- UFC 4 010 02 DoD Minimum Antiterrorism Standoff Distances for Buildings (FOUO)
- UFC 4 021 02 Electronic Security Systems
- UFC 4 022 03 Security Fences and Gates

1.1.6 In matters where the contract specifications specified herein conflict with one another, the Contracting Officer shall make the final determination in regards to what specifications, standard and code will take precedence over the other.

1.1.7 The Contractor, upon request from the respective Activity's Planning and Estimating Office, shall conduct a task order pre-award site walk with the Contracting Officer's Representative to verify the Government's Statement of Intent. The site walks shall be conducted at no additional cost to the Government. The Contractor shall schedule and conduct the site walk with the Contracting Officer's Representative within five (5) working days from the initial notification. A verification of work is not a promise that a task order will be awarded to the Contractor based upon the site walk, e.g. the Government may choose to opt out of having the work performed, and therefore the Contractor will not be compensated.

1.1.8 Task Order Plan/Work Order Plan (TOPWOP): The TOPWOP consists of the Contractor's Statement of Work, the Government's Statement of Intent, the applicable UFGS's, and Record Shop Drawings. The Contractor shall use and edit each applicable UFGS section that is applicable to the Government's Statement of Intent to develop their TOPWOP. It is the Contractor's responsibility to download the applicable UFGS's for each definable feature of work to be performed in accordance with the proposed TOPWOP. The Contractor shall edit each UFGS by adding, deleting, and revising the applicable text. For bracketed items, the Contractor may choose the applicable suggested items provided in the specification or shall insert the appropriate data or information as necessary in the blank [____]. All chosen and inserted data and information shall be in "Bold" number "11" font. The Contractor shall edit out (remove) the section paragraphs that are non-applicable to the work to be performed.

1.1.8.1 The Contractor shall incorporate a new SECTION 01 11 00 "SUMMARY OF WORK" into to each TOPWOP. Do not copy the basic contract's SECTION 01 11 00 "SUMMARY OF WORK" and insert it as part of the TOPWOP. Insert the Government's Statement of Intent for each task order TOPWOP in Part 1 "General", paragraph 1.4.1. The Contractor shall insert their "Statement of Work" for each task or TOPWOP in Part 1 "General", as paragraph 1.4.3.

1.1.8.2 The Contractor shall submit each fully developed TOPWOP as part of their proposal package. Shop drawings need not be submitted at this time. The assigned Contracting Officer's Representative will perform a technical analysis of the TOPWOP to validate for completeness. The Contracting Officer's Representative will compare the submitted UFGS section(s) to the specific unedited UFGS section(s) to ensure and validate that pertinent paragraphs have not been omitted from the Contractor's proposed UFGS section(s). The Contractor shall correct all deficiencies and omissions found in the TOPWOP to the satisfaction of the Contracting Officer's Representative.

1.1.8.3 The Contractor is informed that the UFGS's are updated and new sections are added periodically. The Government may require the Contractor to use the most recent updated and new sections at any time during the contract performance period. The Contractor shall use the added UFGS's as applicable to meet the Government's Statement of Intent.

1.1.8.4 Contractor supplied shop drawings submitted after award of a task order shall be consistent with the approved TOPWOP. The Contracting Officer's Representative will review and validate the record shop drawings for completeness.

1.1.8.5 The Contractor shall incorporate the requirements as specified in an issued Category Exclusion (CATX) and Decision Memorandum (DM) into their Task Order Plan/Work Order Plan (TOPWOP) at the development stage.

1.1.9 In creating the technical specifications in the Task Order Plan/Work Order Plan, the Contractor may substitute proprietary products, upon approval by the Contracting Officer, with products that meet or exceed the existing product(s) specifications and capabilities being replaced.

1.1.10 All in-progress and completed project work will be inspected by the Contracting Officer's Representative in accordance with the Government's Quality Assurance Surveillance Plan. All work shall conform to the specifications, standards and applicable codes as specified herein, and shall be performed in accordance with the approved Task Order Plan/Work Order Plan (TOPWOP) and approved record shop drawings.

1.2 DEFINITIONS

1.2.1 Activity: Where the use of the word “Activity” or “Activity’s” is used it shall mean Marine Corps Base Camp Pendleton, Naval Weapons Station Seal Beach Fallbrook Detachment, Marine Corps Air Station Miramar and Marine Corps Recruit Depot San Diego or a combination of all.

1.2.2 Contracting Officer’s Representative: For the purposes of this contract, a Contracting Officer’s Representative is a member of the Government’s contracting management team for both pre-award and post award task order activities.

1.2.3 Deficiency: The quality or condition of being deficient; incompleteness or inadequacy.

1.2.4 Laydown Area: An area that has been cleared for the temporary storage of equipment and supplies. Laydown areas are usually covered with rock and/or gravel to ensure accessibility and safe maneuverability for transport and off-loading of vehicles.

1.2.5 Planning and Estimating Office: The respective Activity’s office that plans, estimates and reviews/analyzes pre-award task order projects.

1.2.6 Site: Specific to one of the Activity’s, i.e. Marine Corps Base Camp Pendleton, Naval Weapons Station Seal Beach Fallbrook Detachment, Marine Corps Air Station Miramar or Marine Corps recruit Depot San Diego: When the term “Site” is referenced it shall mean within the boundaries of the respective Activity.

1.2.7 Job Site: Specific to a project site on the respective Activity: When the term “Job Site” is referenced it shall mean the site where work is actually performed.

1.3 SUBMITTALS

Submittals shall be submitted to each Activity for review and acceptance.

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity’s Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Submit the contract required submittals as specified in each contract section, and as specified herein, within five (5) calendar days after award of this contract. GA, KO, PO
- Submit task order specific submittals within five (5) calendar days after award of a task order; GA, KO, PO

PART 2 PRODUCTS

Not used.

PART 3 EXECUTION

Not used.

--End of Section--

SECTION 01 14 00.05 20

WORK RESTRICTIONS

05/09

PART 1 GENERAL MARINE CORPS BASE CAMP PENDLETON AND NAVAL WEAPONS STATION SEAL BEACH FALLBROOK DETACHMENT, CA

1.1 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Contractor Emergency Contact List; GA, RO, PO
- List of key personnel and tradesperson requiring access into secure areas; GA, KO, PO

1.2 Special Scheduling Requirements for Task Orders

1.2.1 The Contractor shall submit a work schedule for each project to the Contracting Officer for approval before mobilization and work may proceed, and where interference with normal operations may occur.

1.2.2 Facilities may remain open for business during the construction period. The Contractor shall conduct construction operations so as to avoid or cause the least possible interference with normal business operations of the activity.

1.3 CONTRACTOR ACCESS AND USE OF PREMISES

1.3.1 Activity Regulations

1.3.1.1 Ensure that Contractor and subcontractor personnel employed on the Activity are familiar with, and obey all Activity regulations and Base Orders, including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress. Ingress and egress of Contractor vehicles and personnel with RapidGate may use all entrances. Contractor vehicles and personnel with 90 day business passes may use the San Luis Rey, Las Pulgas and San Onofre entrances ONLY. To minimize traffic congestion, delivery of materials shall be outside of peak traffic hours 6:30 to 8:00 a.m. and 3:30 to 5:00 p.m. unless otherwise approved by the Contracting Officer. Do not enter any restricted areas unless required to do so and until cleared for such entry. Equipment shall be conspicuously marked for identification.

1.3.1.2 Contractor Personnel Contact List: Furnish a list of contact Contractor key personnel, to include telephone numbers for use in the event of an emergency. Maintain the list current. Submit revisions to the Contracting Officer within 48-hours regarding any changes in contact key personnel. Note: Subcontractor personnel shall not be included as contact key personnel.

1.3.1.3 Identification Badges: Contractors who are interested in the RAPIDGate® Program should call (877) 727-4342. Business Hours: 6:00 a.m. - 4:00 p.m. Monday-Thursday, CLOSED Fridays. The Contractor Security Section, located at Bldg. 41501T, adjacent to the Las Pulgas Gate.

1.3.1.4 90-day Business Passes for Contractor, subcontractor and vendors who have a need to access the Base and do not participate in RAPIDGate® may be obtained from the Contractor Security Section. A letter from the Employer is required as verification that the individual is currently employed by the company performing work, as well as a letter from the sponsoring unit/section on the Base. A background check is conducted for security purposes at the time of application. Upon successful completion of the background check, the applicant is issued a Business Pass, which may then be used to gain entry onto MCB Camp Pendleton.

1.3.1.4 Flight Line Access and Identification Badges.

1. The Flight Line is secured by a perimeter fence with swipe card personnel and vehicle access gates. Issuance of vehicle gate access is to be kept to a minimum (i.e., not all employees). Access is via the programming of Rapid Gate Identification badges. Before the card will be programmed for any perimeter vehicle gates, personnel must obtain a Flight Line Driver's License, through the Contracting Officer. Flight Line Driver's Licenses are issued on one of two tiers, depending on the work location: Tier One – Ramp Access Only, and; Tier Two – Full Access.
 - i. Tier One drivers will not enter or cross the runways or taxiways. It allows only for driving on the Hangar safety road, on parking ramps, on service areas north of the runway and on the perimeter road on the south side of the runways.
 - ii. Tier Two drivers will operate vehicles on or across runways or taxiways. It allows for driving on all areas of the airfield. Only a small percentage of personnel require Tier Two licensing, permitting them to drive across runways but only with radio communication to MCAS Camp Pendleton (Air Traffic) Ground Control.
2. Flight Line driver's licenses are issued after completion of the appropriate Flight Line Driver's Course given by MCAS Camp Pendleton Flight Line Operations at no cost, and are valid for one year only, and then must be reissued
3. Crane Operations.
 - a. A general notice of possible airfield interference do to construction/crane activity must be submitted to the MCAS Camp Pendleton Flight Line Operations Officer (FlightlineOps), via the Contracting Officer, on the Federal Aviation Administration (FAA) Form 7460-1. FlightlineOps will forward to the FAA if applicable/required. The form should be submitted at the task order Preconstruction Meeting, but not less than 45 days before the start of any crane work. Include in Block 21. Complete Description of Proposal, crane maximum dimension data. The applicable FAA regulations and FAA Form 7460-1 and instructions can be access at the following link/internet address:

<http://forms.faa.gov/forms/faa7460-1.pdf>

- b. Cranes must be marked and lighted in accordance with all applicable regulations for crane work in and/or around airfields, and have a construction flag on top of the boom.
- c. A flight line driver's license or escort is required for vehicular access to the Flight Line.

1.3.2 No Smoking Policy: Smoking is prohibited within and outside of all buildings on Marine Corps Base Camp Pendleton, 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.

1.3.3 Normal Working Hours: Normal working hours is a 9-1/2 hour work shift, from 7 a.m. to 4:30 p.m. Monday through Friday, excluding weekends and Federal holidays.

1.3.4 Work Outside Regular Hours: Work outside regular working hours requires Contracting Officer approval. Make application in writing on company letterhead five (5) calendar days prior to such work to allow arrangements to be made by the Government for inspecting the work in progress. Provide specific dates, hours, location, type of work to be performed, contract number and task order number. Based on the justification provided, the Contracting Officer may approve work outside regular hours. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer. The Government will not compensate the Contractor for work outside of normal working hours when it is requested by and at the convenience of the Contractor.

1.3.5 Occupied and Existing Building(s): The Contractor may be required to work in and around existing buildings that are occupied. Do not enter the building(s) without prior approval from the Contracting Officer. Submit an Ingress and Egress Plan (IEP) when the safety of the occupants is at risk. Provide temporary closures to maintain security and safety. Provide dust covers or protective enclosures to protect existing work that remains and Government property located in or around the building(s) or facilities during the construction period. 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 may remove and relocate Government property in the areas of the building(s) or facilities scheduled to receive work.

1.3.6 Interruptions

1.3.6.1 Interruption to potable water, sanitary sewer, communication, electric, and HVAC may be limited to pre-determined scheduled outage hours. This time limit includes time for deactivation and reactivation.

1.3.6.2 Operation of Activity Utilities: The Contractor shall not operate nor disturb the setting of control devices in the Activities DDC, HVAC, and communication systems. The Government will operate the control devices as required for normal conduct of the work. The Contractor shall notify the Contracting Officer giving reasonable advance notice when such operation is required.

1.3.6.3 Permission to interrupt any Activity's utility services shall be requested in writing a minimum of 21-calendar days prior to the desired date of interruption. Interruption to potable water, sanitary sewer, communication, electric, and HVAC and DDC controls will be limited to pre-determined scheduled outage hours. This time limit includes the time to deactivate and

reactivate the systems. Each service interruption request shall state the system involved, area of work, approximate duration of the outage, and the nature of work involved.

1.3.6.4 Outages required during the execution of work which affects existing systems shall be arranged and scheduled at the convenience of the Government and may be required to be scheduled outside normal working hours or on weekends.

1.3.6.5 The Contractor is responsible for coordinating outages for all non-government owned utilities.

1.4 SECURITY REQUIREMENTS

1.4.1 Contract Clause "FAR 52.204-2, Security Requirements and Alternate II," "FAC 5252.236-9301, Special Working Conditions and Entry to Work Area."

1.4.2 Employment Restrictions for conducting work on each Activity:

1.4.2.1 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award of a task order an alphabetical list of key personnel who require entry into secure areas to perform the necessary management and administrative work requirements as specified herein. The list shall be maintained current during the performance of work in the secure area(s). Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.2 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award a task order an alphabetical list of Contractor in-house tradespersons and subcontractors personnel and tradespersons who require entry onto each Activity to perform the work requirements as required herein. The list shall be maintained current. Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.3 Furnish for the following information for each person:

- a) Name
- b) Date and place of birth
- c) Citizenship\
- d) Social security Number
- e) Current pass expiration date
- f) Naturalization or Alien Registration number
- g) Passport number, place of issue, and expiration date

1.4.2.4 Followed by on company letterhead:

"I hereby certify that all personnel on this list are either born U.S. citizens, naturalized U.S. citizens with the naturalization number shown or legal aliens with the alien registration number indicated."

Signature/Date/Title

1.4.3 All security requirements apply to all subcontractors and suppliers associated with this contract. The Contractor and subcontractors shall comply with the following:

- a) Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.
- b) Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.
- c) Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.
- d) Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.
- e) Coordinate photography requirements with the Contracting Officer's Representative. Some areas restrict or prohibit photographing Government property.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

1.5 EXISTING WORK:

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

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

1.5.1.2 Repair or replace portions of existing work which have been altered or damaged during construction operations to match existing or adjacent Government property conditions. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before work started. The Government will not reimburse the Contractor for repair of damaged Government property due to Contractor negligence.

1.6 LOCATING

1.6.1 Locating Coordination: Contractors are required to apply for locating services to locate existing underground utilities a minimum of 21-calendar days in advance of mobilization and staging of materials. The request shall include a site specific drawing of the location. The Contractor shall provide a Competent Person at the site being located by the Government. The Contractor shall maintain all locating markings upon completion of the locating services. The

Contractor shall request locating services from Dig Alert/USA for utilities that are not Government owned. Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Excavation performed with power-driven equipment is not permitted within a two foot radius of a known Government-owned utility, infrastructure or any other subsurface construction. For work immediately adjacent to, or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the utility and continue until the utility is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing work that are affected by the excavation until approval for backfill is granted by the Contracting Officer. Report all damage to Government-owned utility, infrastructure or any other subsurface construction immediately to the Contracting Officer.

1.6.1 The Contractor shall comply with the locating requirements found in the Camp Pendleton Requirements (CPR). The Contractor shall hire out an independent locating service provider to perform locating services that are in addition to the locating services provided by the Activity and Dig Alert/USA.

1.6.1.1 For Third Party locating, the Contractor shall provide a quotation from two independent locating service providers on the independent locating service provider's company letterhead. The Contractor shall apply their awarded pre-priced coefficient to the independent locating service provider's quotes and submit the quotes as part of their proposal which will be then reviewed by the ET for reasonableness.

1.7 SITE PERMITS

1.7.1 Welding Permits: The Contractor shall obtain a welding permit for all "Hot Work", to include burning, welding, brazing and soldering. Obtain the welding permit from the respective Activity's Fire Marshall. **CONTRACTORS ARE REQUIRED TO MEET ALL OF THE RESPECTIVE ACTIVITY'S CRITERIA BEFORE A PERMIT IS ISSUED.** It is mandatory to have a designated FIRE WATCH for any "Hot Work" performed at each respective Activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit. "Hot Work" may not begin until the welding permit has been obtained. Welding permits shall be posted at a conspicuous location in the construction area.

1.8 GOVERNMENT-FURNISHED MATERIAL AND EQUIPMENT

1.8.1 The Government will not provide materials or equipment in support of work ordered on this contract.

1.8 CONTRACTOR FURNISHED ITEMS

1.8.1 Temporary Toilet: The Contractor shall provide a temporary toilet facility at each work site when Government facilities are not available for Contractor personnel use. Follow the guidelines found in 29 CFR 1926 51(c). The temporary toilet shall come complete with a toilet, urinal and lavatory. The temporary toilet shall be maintained with an adequate supply of toilet paper and paper towels, hand soap, and potable water. The temporary toilet facility shall be disinfected at a minimum on a weekly schedule. Have the black water tank pumped to maintain sanitary conditions for personnel.

1.8.2 Locate the temporary toilet in an area that is accessible by their personnel only. Place the temporary toilet facility on level ground and ensure its stability. Do not place the temporary toilet

facility near stormwater drainage basins, in the path of stormwater drainage systems, or where there may be potential of spillage into a United States waterway.

1.8.3 The provisions to provide temporary toilets at the constructions sites are factored into the Contractor's awarded coefficient factors.

1.9 SITE CONDITIONS

1.9.1 The Contractor shall carefully examine each awarded task order project site to verify the site conditions prior to start of work, and before mobilization and staging of materials.

1.9.2 Differing Site Conditions: Prior to progress of work, if conditions are encountered at the site which differ physically or materially from those that were identified during the site visits conducted during the development of a task order , the Contractor shall immediately notify the Contracting Officer and Contracting Officer's Representative of the specific conditions. The Contractor shall not disturb the area(s) of differing site conditions or begin work until the differing site conditions have been verified by the Contracting Officer and Contracting Officer's Representative. The Contractor shall wait for further instruction from the Contracting Officer before proceeding with work. If the Contractor proceeds without a notification from the Contracting Officer to proceed or without a contract modification, the Contractor is proceeding at their own risk and may not be compensated for any additional work or materials.

If differing site conditions occur during construction, the same contractual conditions apply as stated above.

1.10 PROTECTION

1.10.1 Before construction operations begin and during construction operations continuously evaluate the conditions at the construction site and take immediate action to protect all personnel working in and around the construction site. Take all necessary safety measures to protect the public.

1.10.2 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install 6-foot high chain link temporary fence with windscreen around the construction site in accordance with the approved Site Specific Construction Zone Plan. The temporary fence will mark the boundaries of the safety zone. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants. Provide gates to accommodate equipment, personnel, and emergency vehicle ingress/egress. Maintain fencing in good condition and repair or replace as necessary.

1.10.3 Aircraft and aircraft engines are subject to Foreign Object Damage (FOD) The Contractor shall not introduce FOD onto the airfield at any time. The Contractor shall continually police FOD (debris and waste material) lying on airfield pavements and adjacent areas. The Contractor shall dispose of the collected debris and waste material in closed lid containers.

1.10.4 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install rumble racks at construction entrances where truck and equipment traffic is frequent to reduce soil compaction and limit tracking of sediment into streets.

1.10.5 Protect trees within the construction site, which might be damaged during construction operations and which are indicated to be left in place, with a 6-foot high fence. Erect and secure

the fence at a minimum of 5-feet from the trunk each individual tree or follow the outer perimeter of branches or clumps of trees. Replace any tree designated to remain that is damaged during construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.6 Protect adjacent lawns and landscaping from being damaged during construction operations. Replace any lawns and landscaping plants, bushes, hedges, ground cover, decorative rock and decorative barked areas that are damaged during the construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.7 Protect the surrounding environment in accordance with the approved Environmental Protection Plan.

1.11 CONTRACTOR WORK SITE:

1.11.1 Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the Contractor's Waste Management Plan.

1.11.1.1 Temporary Facilities: The Contractor shall provide their own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste off of the respective Activity's premises and in accordance with the applicable laws, and local regulation.

1.11.1.2 Contractor-Furnished Equipment: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

1.11.1.3 Contractor-Furnished Material: Protect and secure products stored at this site.

- a. All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.
- b. In addition, submit a current certificate recognized by the State of California and the respective Activity that states the Backflow Preventer and Cross-Connection technician has completed at least 10 hours of training in backflow preventer installations.

1.12 TEMPORARY UTILITIES

1.12.1 The respective Activity may provide water and power in reasonable quantities at the prevailing rates or free. The Contractor shall coordinate efforts with the Contracting Officer's Representative for water services after award of the contract.

1.12.2 The Contractor shall not connect into any Activity's sewer system. The Contractor is responsible for providing their own temporary wastewater collection systems at their expense.

1.12.3 All labor, material, and equipment necessary to connect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

1.12.4 The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

1.12.5 The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the Contracting Officer's Representative for the respective Activity 21-calendar days prior to any tie-ins.

1.12.6 Telephone and Data Service: The respective Activity's will not provide telephone and internet services to the Contractor. The Contractor shall make arrangements for telephone and internet services at their expense.

1.12.7 Maintain utility services to existing facilities surrounding the site at all times.

1.12.8 Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 14 00.05 20

WORK RESTRICTIONS

05/09

PART 1 GENERAL MARINE CORPS AIR STATION MIRAMAR, CA

1.1 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Contractor Emergency Contact List; GA, KO, PO
- List of key personnel and tradesperson requiring access into secure areas; GA, KO, PO

1.2 Special Scheduling Requirements for Task Orders

1.2.1 The Contractor shall submit a work schedule for each project to the Contracting Officer for approval before mobilization and work may proceed, and where interference with normal operations may occur.

1.2.2 Facilities may remain open for business during the construction period. The Contractor shall conduct construction operations so as to avoid or cause the least possible interference with normal business operations of the activity.

1.2.3 Special Events

1.2.3.1 Annual Miramar Air Show: Construction activities will be suspended for the Annual Miramar Air Show, which normally takes place in October of each year, but is subject to change. No work shall be allowed from the Wednesday before, until the Monday after the air show. All construction sites shall be thoroughly clean and secured on the Wednesday before the air show. A 45 to 60 day advance notice of actual dates will be provided by the Contracting Officer. This period has been considered in computing the time allowed for the performance of this contract.

1.2.4 Airfield Quiet Hours: Quiet Hours may be instituted at any time on the airfield for Change of Command, Awards, etc. ceremonies. Quiet Hours will normally last one to two hours. All noise creating construction activities must be curtailed during these hours. Anticipate at least two events per month.

1.3 CONTRACTOR ACCESS AND USE OF PREMISES

1.3.1 Activity Regulations

1.3.1.1 Ensure that Contractor personnel employed on the MCAS Miramar become familiar with and obey the Base's regulations including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress.

1.3.1.2 To minimize traffic congestion, delivery of materials and equipment shall be outside of peak traffic hours (6:30 to 8:00 a.m. and 3:30 to 5:00 p.m.) unless otherwise approved by the Contracting Officer. All deliveries are to be via the East Gate on Miramar Way, unless previously approved by the Contracting Officer.

1.3.1.3 Do not enter any restricted areas unless required to do so and until cleared for such entry

1.3.1.4 Contractor Personnel Contact List: Furnish a list of contact Contractor key personnel, to include telephone numbers for use in the event of an emergency. Maintain the list current. Submit revisions to the Contracting Officer within 48-hours regarding any changes in contact key personnel. Note: Subcontractor personnel shall not be included as contact key personnel.

1.3.1.5 Base Access-Identification Badges. All contractor personnel, including all subcontractor, sub-subcontractors, material/supply delivery drivers, etc., are required to obtain Rapid Gate Identification badges through the Contracting Officer. Rapid Gate has an office/kiosk at the MCAS Miramar East Gate off Miramar Way. All costs involved in obtaining Rapid Gate Identification badges are the responsibility of the contractor.

1.3.1.6 Flight Line Access and Identification Badges.

4. The Flight Line is secured by a perimeter fence with swipe card personnel and vehicle access gates. Issuance of vehicle gate access is to be kept to a minimum (i.e., not all employees). Access is via the programming of Rapid Gate Identification badges. Before the card will be programmed for any perimeter vehicle gates, personnel must obtain a Flight Line Driver's License, through the Contracting Officer. Flight Line Driver's Licenses are issued on one of two tiers, depending on the work location: Tier One – Ramp Access Only, and; Tier Two – Full Access.
 - i. Tier One drivers will not enter or cross the runways or taxiways. It allows only for driving on the Hangar safety road, on parking ramps, on service areas north of the runway and on the perimeter road on the south side of the runways.
 - ii. Tier Two drivers will operate vehicles on or across runways or taxiways. It allows for driving on all areas of the airfield. Only a small percentage of personnel require Tier Two licensing, permitting them to drive across runways but only with radio communication to Miramar (Air Traffic) Ground Control.
5. Flight Line driver's licenses are issued after completion of the appropriate Flight Line Driver's Course given by MCAS Miramar Flight Line Operations at no cost, and are valid for one year only, and then must be reissued

6. Crane Operations.

- d. A general notice of possible airfield interference do to construction/crane activity must be submitted to the MCAS Miramar Flight Line Operations Officer (FlightlineOps), via the Contracting Officer, on the Federal Aviation Administration (FAA) Form 7460-1. FlightlineOps will forward to the FAA if applicable/required. The form should be submitted at the task order Preconstruction Meeting, but not less than 45 days before the start of any crane work. Include in Block 21. Complete Description of Proposal, crane maximum dimension data. The applicable FAA regulations and FAA Form 7460-1 and instructions can be access at the following link/internet address:
<http://forms.faa.gov/forms/faa7460-1.pdf>
- e. Cranes must be marked and lighted in accordance with all applicable regulations for crane work in and/or around airfields, and have a construction flag on top of the boom.
- f. A flight line driver's license or escort is required for vehicular access to the Flight Line.

1.3.2 No Smoking Policy: Smoking is prohibited within and outside of all buildings on Marine Corps Air Station Miramar, 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.

1.3.3 Normal Working Hours: Regular working hours shall consist of either an 8 or 10 hour period between 0630 – 1700 Monday through Friday; excluding Government holidays.

1.3.3.1 Work Outside Regular Hours: Work outside regular working hours requires Contracting Officer approval. Make application in writing on company letterhead five (5)-calendar days prior to such work to allow arrangements to be made by the Government for inspecting the work in progress. Provide specific dates, hours, location, type of work to be performed, contract number and task order number. Based on the justification provided, the Contracting Officer may approve work outside regular hours. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer. The Government will not compensate the Contractor for work outside of normal working hours when it is requested by and at the convenience of the Contractor.

1.3.3.2 Contractor's working hours and noise generated by work activities shall be coordinated so as not to conflict with staff service and specific quiet hours on Thursday and Friday due to Marine Recruit Graduation. Noise generating construction activities near the parade deck will be minimized or eliminated completely during these observed quiet hours. The current-year graduation schedule can be found here:

- i. <http://www.mccsmcrd.com/Graduation/GraduationDates/index.html>.
- ii. The Thursday and Friday graduation activities can be found here:
<http://www.mccsmcrd.com/Graduation/index.html>
- iii. A supplemental map showing restricted areas of construction during Thursday and Friday graduation events can be provided upon request.
- iv. Contractors may start or end work later than normal hours on Thursday and Friday. Approval must be obtained from the Government.

1.3.7 Occupied and Existing Building(s): The Contractor may be required to work in and around existing buildings that are occupied. Do not enter the building(s) without prior approval from the Contracting Officer. Submit an Ingress and Egress Plan (IEP) when the safety of the occupants is at risk. Provide temporary closures to maintain security and safety. Provide dust covers or protective enclosures to protect existing work that remains and Government property located in or around the building(s) or facilities during the construction period. 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 may remove and relocate Government property in the areas of the building(s) or facilities scheduled to receive work.

1.3.8 Interruptions

1.3.8.1 Interruption to potable water, sanitary sewer, communication, electric, and HVAC may be limited to pre-determined scheduled outage hours. This time limit includes time for deactivation and reactivation.

1.3.8.2 Operation of Activity Utilities: The Contractor shall not operate nor disturb the setting of control devices in the Activities DDC, HVAC, and communication systems. The Government will operate the control devices as required for normal conduct of the work. The Contractor shall notify the Contracting Officer giving reasonable advance notice when such operation is required.

1.3.8.3 Permission to interrupt any Activity's utility services shall be requested in writing a minimum of 21-calendar days prior to the desired date of interruption. Interruption to potable water, sanitary sewer, communication, electric, and HVAC and DDC controls will be limited to pre-determined scheduled outage hours. This time limit includes the time to deactivate and reactivate the systems. Each service interruption request shall state the system involved, area of work, approximate duration of the outage, and the nature of work involved.

1.3.8.4 Outages required during the execution of work which affects existing systems shall be arranged and scheduled at the convenience of the Government and may be required to be scheduled outside normal working hours or on weekends.

1.3.8.5 The Contractor is responsible for coordinating outages for all non-government owned utilities.

1.4 SECURITY REQUIREMENTS

1.4.1 Contract Clause "FAR 52.204-2, Security Requirements and Alternate II," "FAC 5252.236-9301, Special Working Conditions and Entry to Work Area."

1.4.2 Employment Restrictions for conducting work on each Activity:

1.4.2.1 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award of a task order an alphabetical list of key personnel who require entry into secure areas to perform the necessary management and administrative work requirements as specified herein. The list shall be maintained current during the performance of work in the secure area(s). Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.2 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award a task order an alphabetical list of Contractor in-house

tradespersons and subcontractors personnel and tradespersons who require entry onto each Activity to perform the work requirements as required herein. The list shall be maintained current. Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.3 Furnish for the following information for each person:

- a) Name
- b) Date and place of birth
- c) Citizenship\
- d) Social security Number
- e) Current pass expiration date
- f) Naturalization or Alien Registration number
- g) Passport number, place of issue, and expiration date

1.4.2.4 Followed by on company letterhead:

"I hereby certify that all personnel on this list are either born U.S. citizens, naturalized U.S. citizens with the naturalization number shown or legal aliens with the alien registration number indicated."

Signature/Date/Title

1.4.3 All security requirements apply to all subcontractors and suppliers associated with this contract. The Contractor and subcontractors shall comply with the following:

- f) Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.
- g) Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.
- h) Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.
- i) Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.
- j) Coordinate photography requirements with the Contracting Officer's Representative. Some areas restrict or prohibit photographing Government property.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for

default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

1.5 EXISTING WORK:

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

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

1.5.1.2 Repair or replace portions of existing work which have been altered or damaged during construction operations to match existing or adjacent Government property conditions. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before work started. The Government will not reimburse the Contractor for repair of damaged Government property due to Contractor negligence.

1.6 LOCATING

1.6.1 Locating Coordination: Contractors are required to apply for locating services to locate existing underground utilities a minimum of 21-calendar days in advance of mobilization and staging of materials. The request shall include a site specific drawing of the location. The Contractor shall provide a Competent Person at the site being located by the Government. The Contractor shall maintain all locating markings upon completion of the locating services. The Contractor shall request locating services from Dig Alert/USA for utilities that are not Government owned. Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Excavation performed with power-driven equipment is not permitted within a two foot radius of a known Government-owned utility, infrastructure or any other subsurface construction. For work immediately adjacent to, or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the utility and continue until the utility is uncovered or until clearance for the new grade is assured. Support uncovered lines or other existing work that are affected by the excavation until approval for backfill is granted by the Contracting Officer. Report all damage to Government-owned utility, infrastructure or any other subsurface construction immediately to the Contracting Officer.

1.6.1 The Contractor shall comply with MCAS Miramar's locating requirements. The Contractor shall hire out an independent third party locating service provider to perform locating services that are in addition to the locating services provided by the Activity and Dig Alert/USA.

1.6.1.1 When Third Party locating is required, the Contractor shall provide a quotation from two independent locating service providers on the independent locating service provider's company letterhead. The Contractor shall apply their awarded pre-priced coefficient to the independent locating service provider's quotes and submit the quotes as part of their proposal which will be then reviewed by the Planning and Estimating Office for reasonableness.

1.7 SITE PERMITS

1.7.1 Welding Permits: The Contractor shall obtain a welding permit for all "Hot Work", to include burning, welding, brazing and soldering. Obtain the welding permit from the respective Activity's Fire Marshall. **CONTRACTORS ARE REQUIRED TO MEET ALL OF THE RESPECTIVE ACTIVITY'S CRITERIA BEFORE A PERMIT IS ISSUED.** It is mandatory to

have a designated FIRE WATCH for any "Hot Work" performed at each respective Activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit. "Hot Work" may not begin until the welding permit has been obtained. Welding permits shall be posted at a conspicuous location in the construction area.

1.8 GOVERNMENT-FURNISHED MATERIAL AND EQUIPMENT

1.8.1 The Government will not provide materials or equipment in support of work ordered on this contract.

1.8 CONTRACTOR FURNISHED ITEMS

1.8.1 Temporary Toilet: The Contractor shall provide a temporary toilet facility at each work site when Government facilities are not available for Contractor personnel use. Follow the guidelines found in 29 CFR 1926 51(c). The temporary toilet shall come complete with a toilet, urinal and lavatory. The temporary toilet shall be maintained with an adequate supply of toilet paper and paper towels, hand soap, and potable water. The temporary toilet facility shall be disinfected at a minimum on a weekly schedule. Have the black water tank pumped to maintain sanitary conditions for personnel.

1.8.2 Locate the temporary toilet in an area that is accessible by their personnel only. Place the temporary toilet facility on level ground and ensure its stability. Do not place the temporary toilet facility near stormwater drainage basins, in the path of stormwater drainage systems, or where there may be potential of spillage into a United States waterway.

1.8.3 The provisions to provide temporary toilets at the constructions sites are factored into the Contractor's awarded coefficient factors.

1.9 SITE CONDITIONS

1.9.1 The Contractor shall carefully examine each awarded task order project site to verify the site conditions prior to start of work, and before mobilization and staging of materials.

1.9.2 Differing Site Conditions: Prior to progress of work, if conditions are encountered at the site which differ physically or materially from those that were identified during the site visits conducted during the development of a task order, the Contractor shall immediately notify the Contracting Officer and Contracting Officer's Representative of the specific conditions. The Contractor shall not disturb the area(s) of differing site conditions or begin work until the differing site conditions have been verified by the Contracting Officer and Contracting Officer's Representative. The Contractor shall wait for further instruction from the Contracting Officer before proceeding with work. If the Contractor proceeds without a notification from the Contracting Officer to proceed or without a contract modification, the Contractor is proceeding at their own risk and may not be compensated for any additional work or materials.

If differing site conditions occur during construction, the same contractual conditions apply as stated above.

1.10 PROTECTION

1.10.1 Before construction operations begin and during construction operations continuously evaluate the conditions at the construction site and take immediate action to protect all personnel working in and around the construction site. Take all necessary safety measures to protect the public.

1.10.2 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install 6-foot high chain link temporary fence with windscreen around the construction site in accordance with the approved Site Specific Construction Zone Plan. The temporary fence will mark the boundaries of the safety zone. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants. Provide gates to accommodate equipment, personnel, and emergency vehicle ingress/egress. Maintain fencing in good condition and repair or replace as necessary.

1.10.3 Aircraft and aircraft engines are subject to Foreign Object Damage (FOD) The Contractor shall not introduce FOD onto the airfield at any time. The Contractor shall continually police FOD (debris and waste material) lying on airfield pavements and adjacent areas. The Contractor shall dispose of the collected debris and waste material in closed lid containers.

1.10.4 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install rumble racks at construction entrances where truck and equipment traffic is frequent to reduce soil compaction and limit tracking of sediment into streets.

1.10.5 Protect trees within the construction site, which might be damaged during construction operations and which are indicated to be left in place, with a 6-foot high fence. Erect and secure the fence at a minimum of 5-feet from the trunk each individual tree or follow the outer perimeter of branches or clumps of trees. Replace any tree designated to remain that is damaged during construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.6 Protect adjacent lawns and landscaping from being damaged during construction operations. Replace any lawns and landscaping plants, bushes, hedges, ground cover, decorative rock and decorative barked areas that are damaged during the construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.7 Protect the surrounding environment in accordance with the approved Environmental Protection Plan.

1.11 CONTRACTOR WORK SITE:

1.11.1 Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the Contractor's Waste Management Plan.

1.11.1.1 Temporary Facilities: The Contractor shall provide their own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste off of the respective Activity's premises and in accordance with the applicable laws, and local regulation.

1.11.1.2 Contractor-Furnished Equipment: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

1.11.1.3 Contractor-Furnished Material: Protect and secure products stored at this site.

- a. All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.
- b. In addition, submit a current certificate recognized by the State of California and the respective Activity that states the Backflow Preventer and Cross-Connection technician has completed at least 10 hours of training in backflow preventer installations.

1.12 TEMPORARY UTILITIES

1.12.1 The respective Activity may provide water and power in reasonable quantities at the prevailing rates or free. The Contractor shall coordinate efforts with the Contracting Officer's Representative for water services after award of the contract.

1.12.2 The Contractor shall not connect into any Activity's sewer system. The Contractor is responsible for providing their own temporary wastewater collection systems at their expense.

1.12.3 All labor, material, and equipment necessary to connect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

1.12.4 The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

1.12.5 The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the Contracting Officer's Representative for the respective Activity 21-calendar days prior to any tie-ins.

1.12.6 Telephone and Data Service: The respective Activity's will not provide telephone and internet services to the Contractor. The Contractor shall make arrangements for telephone and internet services at their expense.

1.12.7 Maintain utility services to existing facilities surrounding the site at all times.

1.12.8 Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 14 00.05 20

WORK RESTRICTIONS

05/09

PART 1 GENERAL MARINE CORPS RECRUIT DEPOT SAN DIEGO, CA

1.1 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Contractor Emergency Contact List; GA, KO, PO
- List of key personnel and tradesperson requiring access into secure areas; GA, KO, PO

1.2 Special Scheduling Requirements for Task Orders

1.2.1 The Contractor shall submit a work schedule for each project to the Contracting Officer for approval before mobilization and work may proceed, and where interference with normal operations may occur.

1.2.2 Facilities may remain open for business during the construction period. The Contractor shall conduct construction operations so as to avoid or cause the least possible interference with normal business operations of the activity.

1.3 CONTRACTOR ACCESS AND USE OF PREMISES

1.3.1 Activity Regulations

1.3.1.1 Contractor is to assume that all buildings on MCRD will be occupied during construction.

1.3.1.2 Ensure that Contractor and subcontractor personnel employed on the Activity are familiar with, and obey all Activity regulations and Base Orders, including safety, fire, traffic and security regulations. Keep within the limits of the work and avenues of ingress and egress. Ingress and egress of Contractor vehicles and personnel with RapidGate may use all entrances. To minimize traffic congestion, delivery of materials and equipment shall be outside of peak traffic hours (6:30 to 8:00 a.m. and 3:30 to 5:00 p.m.) unless otherwise approved by the Contracting Officer. All deliveries are to be via Gate 5, unless previously approved by the Contracting Officer. Do not enter any restricted areas unless required to do so and until cleared for such entry. Equipment shall be conspicuously marked for identification.

1.3.1.2 Contractor Personnel Contact List: Furnish a list of contact Contractor key personnel, to include telephone numbers for use in the event of an emergency. Maintain the list current. Submit revisions to the Contracting Officer within 48-hours regarding any changes in contact key personnel. Note: Subcontractor personnel shall not be included as contact key personnel.

1.3.1.3 Base Access-Identification Badges. The procedures below are the requirements for MCRD.

- v. The Contractor will obtain a letter of support from the customer that their contract ultimately supports. The letter of support will identify the Company Name, Contract Number, period of performance of the Contract, location of performance, the Driver's license and expiration date of each of the Contractor's employees, and the point of contact information for the customer that signed the request. The Contractor's personnel will take the letter of support to request either a business pass or RapidGate access to Support Services Police Administrative Services Branch (Bldg.1523) for processing.
- vi. Business Passes issued by Support Services Division's Police Admin Services Branch to vendors or contractors are effective from the date of issuance, for a period of 60 days or the end of the contract whichever date occurs first.
- vii. Personnel denied a business pass might appeal in writing to the Commanding Officer, Marine Corps Recruit Depot, San Diego (Attn: Provost Marshal). Denial or revocation of a business pass may be made if the applicant:
 - 1. Is listed on the National Terrorist Watch List.
 - 2. Is not a U.S. Citizen and is illegally present in the U.S. or whose U.S. citizenship, immigration status, or Social Security Number (SSN) cannot be verified.
 - 3. Is subject to an outstanding criminal warrant.
 - 4. Whose business pass application contains false or fraudulent information.
 - 5. Has obtained a felony conviction within the last 10 years.
 - 6. Has obtained a total of three criminal misdemeanor convictions within the last 10 years.
 - 7. Who is a registered sex offender regardless of the date of the criminal offense.
 - 8. Has obtained a criminal misdemeanor or felony conviction for the following types of criminal offenses:
 - a. Offenses of a sexual nature;
 - b. Offenses of violence;
 - c. Offenses related to gang related activity, supremacist, or extremist behavior; i.e., hate crimes;
 - d. Crimes resulting from the possession, use, manufacturer, introduction, or distribution of any illegal drug listed in the Comprehensive Drug Abuse Prevention & Control Act of 1970, Schedules I through IV;

- e. Offenses in which weapon instrumentality (e.g., firearm, knife, or other bladed instrument, club, brass knuckles) was used either as a means of violence, or threat of violence;
- f. Whose military active duty was terminated by the receipt of a dishonorable discharge or bad conduct discharge;
- g. Has been issued a debarment order and is currently banned from any military installation;
- h. Who has exhibited characteristics, traits, or other indications that cause concern for the safety or welfare of personnel and/or residents aboard the base; or that causes concern for the physical security of the base.

1.1.3.4 Marine Corps Recruit Depot has implemented a Contractor-managed security service, RAPIDGate™. RAPIDGate is consistent with and complementary to Homeland Security Presidential Directive 12 (HSPD-12) and the Federal Information Processing Standard 201 (FIPS 201). Participation in RAPIDGate is optional, but contractor personnel who are not enrolled in RAPIDGate will be limited to gates which can safely accommodate traffic backups, namely Washington Street Gate. All gates will be open to RAPIDGate registered Contractor personnel.

1.3.2 No Smoking Policy: Smoking is prohibited within and outside of all buildings on Marine Corps Air Station Miramar, 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.

1.3.3 Normal Working Hours: Regular working hours shall consist of either an 8 or 10 hour period between 0630 – 1700 Monday through Friday; excluding Government holidays.

1.3.3.1 Work Outside Regular Hours: Work outside regular working hours requires Contracting Officer approval. Make application in writing on company letterhead five (5)-calendar days prior to such work to allow arrangements to be made by the Government for inspecting the work in progress. Provide specific dates, hours, location, type of work to be performed, contract number and task order number. Based on the justification provided, the Contracting Officer may approve work outside regular hours. During periods of darkness, the different parts of the work shall be lighted in a manner approved by the Contracting Officer. The Government will not compensate the Contractor for work outside of normal working hours when it is requested by and at the convenience of the Contractor.

1.3.3.2 Contractor's working hours and noise generated by work activities shall be coordinated so as not to conflict with staff service and specific quiet hours on Thursday and Friday due to Marine Recruit Graduation. Noise generating construction activities near the parade deck will be minimized or eliminated completely during these observed quiet hours. The current-year graduation schedule can be found here:

- i. <http://www.mccsmcrd.com/Graduation/GraduationDates/index.html>.
- ii. The Thursday and Friday graduation activities can be found here: <http://www.mccsmcrd.com/Graduation/index.html>
- iii. A supplemental map showing restricted areas of construction during Thursday and Friday graduation events can be provided upon request.

- iv. Contractors may start or end work later than normal hours on Thursday and Friday. Approval must be obtained from the Government.

1.3.7 Occupied and Existing Building(s): The Contractor may be required to work in and around existing buildings that are occupied. Do not enter the building(s) without prior approval from the Contracting Officer. Submit an Ingress and Egress Plan (IEP) when the safety of the occupants is at risk. Provide temporary closures to maintain security and safety. Provide dust covers or protective enclosures to protect existing work that remains and Government property located in or around the building(s) or facilities during the construction period. 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 may remove and relocate Government property in the areas of the building(s) or facilities scheduled to receive work.

1.3.8 Temporary Facilities and Controls

1.3.8.1 Temporary Utilities. Reasonable amounts of the following utilities will be made available to the Contractor without charge:

- i. Electricity
- ii. Potable Water
- iii. Sanitary Sewer

1.3.8.2 The point at which the Government will deliver such utilities or services and the quantity available shall be coordinated with the Contracting Officer. The Contractor shall pay all costs incurred in connecting, converting, and transferring the utilities to the work. The Contractor shall make connections, including providing backflow-preventing devices on connections to domestic water lines; and providing transformers; and make disconnections.

1.3.9 Interruptions

1.3.9.1 Interruption to potable water, sanitary sewer, communication, electric, and HVAC may be limited to pre-determined scheduled outage hours. This time limit includes time for deactivation and reactivation.

1.3.9.2 Operation of Activity Utilities: The Contractor shall not operate nor disturb the setting of control devices in the Activities DDC, HVAC, and communication systems. The Government will operate the control devices as required for normal conduct of the work. The Contractor shall notify the Contracting Officer giving reasonable advance notice when such operation is required.

1.3.9.3 Permission to interrupt any Activity's utility services shall be requested in writing a minimum of 30-calendar days prior to the desired date of interruption. Interruption to potable water, sanitary sewer, communication, electric, and HVAC and DDC controls will be limited to pre-determined scheduled outage hours. This time limit includes the time to deactivate and reactivate the systems. Each service interruption request shall state the system involved, area of work, approximate duration of the outage, and the nature of work involved.

1.3.9.4 Outages required during the execution of work which affects existing systems shall be arranged and scheduled at the convenience of the Government and may be required to be scheduled outside normal working hours or on weekends.

1.3.9.5 The Contractor is responsible for coordinating outages for all non-government owned utilities.

1.4 SECURITY REQUIREMENTS

1.4.1 Contract Clause "FAR 52.204-2, Security Requirements and Alternate II," "FAC 5252.236-9301, Special Working Conditions and Entry to Work Area."

1.4.2 Employment Restrictions for conducting work on each Activity:

1.4.2.1 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award of a task order an alphabetical list of key personnel who require entry into secure areas to perform the necessary management and administrative work requirements as specified herein. The list shall be maintained current during the performance of work in the secure area(s). Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.2 Submit for approval to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award a task order an alphabetical list of Contractor in-house tradespersons and subcontractors personnel and tradespersons who require entry onto each Activity to perform the work requirements as required herein. The list shall be maintained current. Any subject changes shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.2.3 Furnish for the following information for each person:

- a) Name
- b) Date and place of birth
- c) Citizenship\
- d) Social security Number
- e) Current pass expiration date
- f) Naturalization or Alien Registration number
- g) Passport number, place of issue, and expiration date

1.4.2.4 Followed by on company letterhead:

"I hereby certify that all personnel on this list are either born U.S. citizens, naturalized U.S. citizens with the naturalization number shown or legal aliens with the alien registration number indicated."

Signature/Date/Title

1.4.3 All security requirements apply to all subcontractors and suppliers associated with this contract. The Contractor and subcontractors shall comply with the following:

- a) Do not publicly disclose any information concerning any aspect of the materials or services relating to this contract, without prior written approval of the Contracting Officer.
- b) Do not disclose or cause to be disseminated any information concerning the operations of the activity's security or interrupt the continuity of its operations.
- c) Do not disclose any information to any person not entitled to receive it. Failure to safeguard any classified information that may come to the Contractor or any person under his control, may subject the Contractor, his agents or employees to criminal liability under 18 U.S.C., Sections 793 and 798.
- d) Direct to the Contracting Officer and or Installation Security Officer for resolution all inquiries, comments or complaints arising from any matter observed, experienced, or learned as a result of or in connection with the performance of this contract, the resolution of which may require the dissemination of official information.
- e) Coordinate photography requirements with the Contracting Officer's Representative. Some areas restrict or prohibit photographing Government property.

Deviations from or violations of any of the provisions of this paragraph, will, in addition to all other criminal and civil remedies provided by law, subject the Contractor to immediate termination for default and withdrawal of the Government's acceptance and approval of employment of the individuals involved.

1.5 EXISTING WORK:

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

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

1.5.1.2 Repair or replace portions of existing work which have been altered or damaged during construction operations to match existing or adjacent Government property conditions. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before work started. The Government will not reimburse the Contractor for repair of damaged Government property due to Contractor negligence.

1.6 LOCATING

1.6.1 Locating Coordination: Contractors are required to apply for locating services to locate existing underground utilities a minimum of 21-calendar days in advance of mobilization and staging of materials. The request shall include a site specific drawing of the location. The Contractor shall provide a Competent Person at the site being located by the Government. The Contractor shall maintain all locating markings upon completion of the locating services. The Contractor shall request locating services from Dig Alert/USA for utilities that are not Government owned. Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Excavation performed with power-driven equipment is not permitted within a two foot radius of a known Government-owned utility, infrastructure or any other subsurface construction. For work immediately adjacent to, or for excavations exposing a utility or other buried obstruction, excavate by hand. Start hand excavation on each side of the utility and continue until the utility is uncovered or until clearance for the new grade is assured.

Support uncovered lines or other existing work that are affected by the excavation until approval for backfill is granted by the Contracting Officer. Report all damage to Government-owned utility, infrastructure or any other subsurface construction immediately to the Contracting Officer.

1.6.1 The Contractor shall comply with MCRD San Diego's locating requirements. The Contractor shall hire out an independent third party locating service provider to perform locating services that are in addition to the locating services provided by the Activity and Dig Alert/USA.

1.6.1.1 When Third Party locating is required, the Contractor shall provide a quotation from two independent locating service providers on the independent locating service provider's company letterhead. The Contractor shall apply their awarded pre-priced coefficient to the independent locating service provider's quotes and submit the quotes as part of their proposal which will be then reviewed by the Planning and Estimating Office for reasonableness.

1.7 SITE PERMITS

1.7.1 Welding Permits: The Contractor shall obtain a welding permit for all "Hot Work", to include burning, welding, brazing and soldering. Obtain the welding permit from the respective Activity's Fire Marshall. **CONTRACTORS ARE REQUIRED TO MEET ALL OF THE RESPECTIVE ACTIVITY'S CRITERIA BEFORE A PERMIT IS ISSUED.** It is mandatory to have a designated FIRE WATCH for any "Hot Work" performed at each respective Activity. The Fire Watch shall be trained in accordance with NFPA 51B and remain on-site for a minimum of 30 minutes after completion of the task or as specified on the hot work permit. "Hot Work" may not begin until the welding permit has been obtained. Welding permits shall be posted at a conspicuous location in the construction area.

1.7.2 Utility Outage and Operational Disruptions

1.7.2.1 Permission to interrupt any MCRD roads, railroads, and/or utility services shall be requested in writing a minimum of 30 calendar days prior to the desired date of interruption. Additionally, this is to include any potential disruptions in the operations of any unit or command facilities and/or buildings.

1.7.2.2 For any outage requirements and/or building disruptions at MCRD's Public Private Venture (PPV) Housing, special requirements must be adhered to. These requirements can be provided upon request. Additionally, a government-provided presentation template will be utilized by the Contractor prior to start of construction

1.7.2.3 Outages should be coordinated to the greatest extent possible during after hours or during the weekend to minimize operational disruptions.

1.8 GOVERNMENT-FURNISHED MATERIAL AND EQUIPMENT

1.8.1 The Government will not provide materials or equipment in support of work ordered on this contract.

1.8 CONTRACTOR FURNISHED ITEMS

1.8.1 Temporary Toilet: The Contractor shall provide a temporary toilet facility at each work site when Government facilities are not available for Contractor personnel use. Follow the guidelines found in 29 CFR 1926 51(c). The temporary toilet shall come complete with a toilet, urinal and lavatory. The temporary toilet shall be maintained with an adequate supply of toilet paper and paper towels, hand soap, and potable water. The temporary toilet facility shall be disinfected at a minimum on a weekly schedule. Have the black water tank pumped to maintain sanitary conditions for personnel.

1.8.2 Locate the temporary toilet in an area that is accessible by their personnel only. Place the temporary toilet facility on level ground and ensure its stability. Do not place the temporary toilet facility near stormwater drainage basins, in the path of stormwater drainage systems, or where there may be potential of spillage into a United States waterway.

1.8.3 The provisions to provide temporary toilets at the constructions sites are factored into the Contractor's awarded coefficient factors.

1.9 SITE CONDITIONS

1.9.1 The Contractor shall carefully examine each awarded task order project site to verify the site conditions prior to start of work, and before mobilization and staging of materials.

1.9.2 Differing Site Conditions: Prior to progress of work, if conditions are encountered at the site which differ physically or materially from those that were identified during the site visits conducted during the development of a task order, the Contractor shall immediately notify the Contracting Officer and Contracting Officer's Representative of the specific conditions. The Contractor shall not disturb the area(s) of differing site conditions or begin work until the differing site conditions have been verified by the Contracting Officer and Contracting Officer's Representative. The Contractor shall wait for further instruction from the Contracting Officer before proceeding with work. If the Contractor proceeds without a notification from the Contracting Officer to proceed or without a contract modification, the Contractor is proceeding at their own risk and may not be compensated for any additional work or materials.

If differing site conditions occur during construction, the same contractual conditions apply as stated above.

1.10 PROTECTION

1.10.1 Before construction operations begin and during construction operations continuously evaluate the conditions at the construction site and take immediate action to protect all personnel working in and around the construction site. Take all necessary safety measures to protect the public.

1.10.2 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install 6-foot high chain link temporary fence with windscreen around the construction site in accordance with the approved Site Specific Construction Zone Plan. The temporary fence will mark the boundaries of the safety zone. Installation of temporary fencing shall not deter or hinder access to existing and new hose connections and fire hydrants. Provide gates to accommodate equipment, personnel, and emergency vehicle ingress/egress. Maintain fencing in good condition and repair or replace as necessary.

1.10.3 Aircraft and aircraft engines are subject to Foreign Object Damage (FOD) The Contractor shall not introduce FOD onto the airfield at any time. The Contractor shall continually police FOD (debris and waste material) lying on airfield pavements and adjacent areas. The Contractor shall dispose of the collected debris and waste material in closed lid containers.

1.10.4 As required specified in an approved Task Order Plan/Work Order Plan (TOPWOP), install rumble racks at construction entrances where truck and equipment traffic is frequent to reduce soil compaction and limit tracking of sediment into streets.

1.10.5 Protect trees within the construction site, which might be damaged during construction operations and which are indicated to be left in place, with a 6-foot high fence. Erect and secure the fence at a minimum of 5-feet from the trunk each individual tree or follow the outer perimeter of branches or clumps of trees. Replace any tree designated to remain that is damaged during construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.6 Protect adjacent lawns and landscaping from being damaged during construction operations. Replace any lawns and landscaping plants, bushes, hedges, ground cover, decorative rock and decorative barked areas that are damaged during the construction operations under this contract with like-kind or as approved by the Contracting Officer at no cost to the Government.

1.10.7 Protect the surrounding environment in accordance with the approved Environmental Protection Plan.

1.11 CONTRACTOR WORK SITE:

1.11.1 Limit use of the premises for work and for storage of material and equipment associated with the contract. Unless otherwise specified or separately agreed to, Government owned material handling equipment, transportation equipment or general tools will not be available for Contractor's use. Clean work area daily and after completion of the work, removing all loose debris and disposing of all non-permanent materials IAW the Contractor's Waste Management Plan.

1.11.1.1 Temporary Facilities: The Contractor shall provide their own office facilities; coordinate and obtain advance approval from the Contracting Officer. Provide and maintain suitable sanitary facilities within the construction limits of the contract. Dispose of sanitary waste off of the respective Activity's premises and in accordance with the applicable laws, and local regulation.

1.11.1.2 Contractor-Furnished Equipment: Equipment is subject to the inspection and approval of the Contracting Officer, prior to and during the life of the contract. All equipment and vehicles shall display readily visible Contractor identification markings. Relocate stored Contractor equipment which may interfere with operations of the Government or with others on-site.

1.11.1.3 Contractor-Furnished Material: Protect and secure products stored at this site.

- a. All replacement units, parts, components, and materials to be used in the maintenance, repair and alteration of facilities and equipment shall be new and compatible with the existing equipment on which it is to be used, and shall comply with applicable Government, commercial, or industrial standards such as Underwriter's Laboratories, Inc., and National Electrical Manufacturers Association.

- b. In addition, submit a current certificate recognized by the State of California and the respective Activity that states the Backflow Preventer and Cross-Connection technician has completed at least 10 hours of training in backflow preventer installations.

1.12 TEMPORARY UTILITIES

1.12.1 The respective Activity may provide water and power in reasonable quantities at the prevailing rates or free. The Contractor shall coordinate efforts with the Contracting Officer's Representative for water services after award of the contract.

1.12.2 The Contractor shall not connect into any Activity's sewer system. The Contractor is responsible for providing their own temporary wastewater collection systems at their expense.

1.12.3 All labor, material, and equipment necessary to connect temporary utility tie-ins, including transformers if necessary, shall be at the expense of the Contractor and under the surveillance of the Contracting Officer.

1.12.4 The Contractor shall be responsible for any damages to Government, private or public facilities and property that may result from the installation and removal of these temporary utility tie-ins. Corrections and repairs shall be made at the Contractor's expense.

1.12.5 The actual location and installation of the temporary tie-in, together with any interruptions of utilities systems, shall be identified and approved by the Contracting Officer prior to execution. Notify the Contracting Officer's Representative for the respective Activity 21-calendar days prior to any tie-ins.

1.12.6 Telephone and Data Service: The respective Activity's will not provide telephone and internet services to the Contractor. The Contractor shall make arrangements for telephone and internet services at their expense.

1.12.7 Maintain utility services to existing facilities surrounding the site at all times.

1.12.8 Contractor shall install and certify back flow preventers on all connections to the potable water supply system.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 01 20 00.00 20

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EP-1110-1-8

(2005) Construction Equipment
Ownership and Operating
Expense Schedule, Vol 1-12

1.2 CONTRACT MODIFICATIONS

In conjunction with the Contract Clause "DFARS 252.236-7000, Modification Proposals-Price Breakdown," and where actual ownership and operating costs of construction equipment cannot be determined from Contractor accounting records, equipment use rates shall be based upon the applicable provisions of the EP-1110-1-8.

1.3 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.

1.3.1 Obligation of Government Payments: 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/or suspensions permitted under the FAR and agency regulations including the following in accordance with "FAR 32.503-6:

- 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 "FAC 5252.236-9310, Record Drawings."

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End Section --

SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

02/10

PART 1 GENERAL

1.1 REFERENCES

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

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

15 CFR 772	Definition of Terms
15 CFR 773	Special Licensing Procedures

1.2 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Contractor's and Subcontractor(s) Information, to include business name, place of business, email address, web site, and phone number, contract specific; GA, RO, PO
- Certificates of Insurance, contract specific; GA, KO, PO
- Surety Bonds, contract specific; GA, KO, PO
- Resume of Project Manager, On-Site Project Superintendent, Quality Control Manager, and Site Safety and Health Officer, contract specific; GA, KO, PO
- List of Contractor key personnel, contract specific; GA, KO, PO
- List of subcontractor(s), task order specific; GA, KO, PO
- List of Contractor and subcontractor tradespersons and personnel that will be on construction site, task order specific; GA, KO, PO
- Approving Authority. Person authorized for signature, contract specific; GA, KO, PO

Submit for the above submittal requirements to the Contracting Officer whenever there is a change in personnel or subcontractors and their personnel within five (5) calendar days of the change. The personnel shall not perform any work or duties until the submittal has been approved by the Contracting Officer.

1.3 MINIMUM INSURANCE REQUIREMENTS

1.3.1 Procure and maintain during the entire period of performance under this contract the following minimum insurance coverage:

1.3.1.1 Comprehensive general liability: \$500,000 per occurrence

1.3.1.2 Automobile liability: \$200,000 per person, \$500,000 per occurrence for bodily injury, \$20,000 per occurrence for property damage

1.3.1.3 Workmen's compensation as required by Federal and State workers' compensation and occupational disease laws.

1.3.1.4 Employer's liability coverage of \$100,000, except in States where workers compensation may not be written by private carriers,

1.3.1.5 Others as required by the great State of California.

1.3.2 Surety bond form shall be completed and submitted to the Contracting Officer within 15-calendar days after award of this contract. The form is found in Section J,H-1.

1.4 CONTRACTOR AND SUBCONTRACTOR REQUIREMENTS

1.4.1 Submit on company letterhead, the Contractor's company name, owner and upper level management names and titles, company address, email contact address, and contact telephone numbers to the Contracting Officer within 15-calendar days after award of this contract.

1.4.1.1 Submit a list of key management personnel, to include those that have Approving Authority, e.g. personnel authorized for signature, to the Contracting Officer within 15-calendar days after award of this contract or within five (5) calendar days of any changes thereof. Key personnel include the Project Manager, On-Site Superintendent, Site Safety and Health Officer and the Contractor's Quality Control Manager. Only the Project Manager shall have signature authority. See the table below for key personnel restrictions:

Position	Can be designated the responsibility of another key personnel position.	Can have a collateral responsibility under the direction of another key person.
Project Manager	No	No.
Site Superintendent	No	No. The On-Site Superintendent reports directly to the Project Manager.
Site safety and Health Officer	No	No.

(SSHO)		
Contractor Quality Control Manager (QCM)	No	<p>Yes. The Contractor's Quality Control Manager (QCM) may perform a collateral responsibility of safety enforcement under the direction of the Contractor's SSHO's provided that the QCM has met the requirements for the collateral responsibility of enforcing safety on the project sites. The QCM cannot be the SSHO. Safety training certificates are required.</p> <p>The QCM shall report directly to the Project Manager on all matters involving quality control.</p>

1.4.2 Submit for the following on company letterhead: Company names of all subcontractors, key subcontractor management names and titles, and their company address and contact telephone numbers. Submit to the Contracting Officer within 15-calendar days after award of a task order.

1.4.3 Contractor and Subcontractor Trades Persons and Personnel: Submit a list of all Contractor and subcontractor personnel, e.g. foremen, leadmen, crew leader and tradesmen, to include the company that they work for, their trade and pay level (helper, apprentice, and journeyman). Submit the list within 15-calendar days after award of a task order. As changes occur and additional information becomes available, update the information contained in previous lists. The lists shall be maintained current. Any subject changes to the list, e.g. personnel no longer with the company or newly hired personnel, shall be submitted to the Contracting Officer within 48-hours, subject to approval.

1.4.4 The Contractor shall submit within 15-calendar days after award of this contract a list and resume of each Project Manager (PM) and each On-Site Project Superintendent (PS) that will be managing this contract. The PM's and PS's shall be employed by the Prime Contractor. Each PM and PS shall have completed 30-hour 29 CFR 1926 OSHA Construction Safety Training Certificate Program (certificate required). Each PM and PS shall have completed the 40-hour Army Corps of Engineers EM-385-1-1 Training Program (certificate required) within 6-months after award this contract. The PM and PS shall be responsible for ensuring that safety on each project is implemented. Each PM and PS shall have completed or will complete the course entitled "Construction Quality Management for Contractors" within 6-months after award of this contract. New personnel shall complete the course within 6-months after being hired. This course is periodically offered at AGC San Diego, 6212 Ferris Square, San Diego, CA 92121: Call (858) 558-7444. All training shall be maintained current. Submit OSHA training certifications for each PM and PS within 15-calendar days after award of this contract. Submit new or renewal certifications to the Contracting Officer within five (5) calendar days upon completion of the training course.

1.4.4.1 The term "On-Site" as used with "On-Site Project Superintendent" shall mean aboard the respective Activity's premises. The On-Site Project Superintendent assigned to each Activity may roam from project site to project site on the Activity's premises.

1.5 RESPONSIBILITIES

1.5.1 The Project Manager is responsible managing this contract, to include all awarded task orders. The On-Site Project Superintendent is responsible for field management, under the direction of the Project Manager, of all awarded task orders. The Project Manager and the On-Site Project Superintendent cannot be the same person. The Project Manager and the On-Site Project Superintendent cannot be a Site Safety and Health Officer (SSHO) or a Quality Control Manager (QCM). Both the Project Manager and On-Site Project Superintendent are subject to removal by the Contracting Officer for non-compliance of the requirements specified herein, and for failure to manage project task orders to ensure quality is produced and projects are completed on schedule. 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 shall be made the subject of claim for extension of time for excess costs or damages by the Contractor.

1.5.1.1 The Project Manager is not required to be aboard each respective Activity at all times during normal working hours, however the Project Manager shall be capable of being on site during normal working hours within one-hour after being notified by the Contracting Officer or the Contracting Officer's representative to address any concerns or issues.

1.5.1.2 The assigned On-Site Project Superintendent for each Activity shall be aboard the respective Activity while work is in progress. The On-Site Superintendent shall ensure that all task order projects are being performed in accordance with the contract requirements and the approved work schedule. The On-Site Superintendent shall also ensure all work is being performed safely, however the ultimate responsibility lies with the SSHO. The On-Site Superintendent assigned to each respective Activity may roam from one project site to another project site on the Activity's premises. The Site Superintendent shall report to the Project Manager.

1.5.2 Contracting Officer approval is required for each Project Manager and each On-Site Project Superintendent prior to start of work on this contract. Submit resumes for each Project Manager and each On-Site Project Superintendent within 15-calendar days after award of this contract or within five (5) calendar days of a newly appointed PM or PS. Each resume shall provide a minimum of three years of ongoing experience in the types of work specified herein, to include references from the past three years and any other qualifications that may enhance the performance of this contract.

1.5.2.1 Subcontractor personnel cannot assume the role of prime contractor key personnel, i.e. Project Manager, On-Site Project Superintendent, SSHO or QCM.

1.5.3 Competent Person: Each task order project shall have a Competent Person assigned to the project and shall be on site while work is in progress. The Competent Person shall have extensive experience in all facets of construction work and shall have completed the OSHA 30-hour training for construction, and where applicable, shall have specific OSHA training for confined space entry, excavation, and scaffolding. The Competent Person shall be responsible for ensuring that all work is being performed in accordance with the contract specifications, in accordance with the awarded and Task Order Plan/Work Order Plan, and ensuring all work in-progress is being performed safely. The Competent Person shall have capability of communicating with the On-Site Project Superintendent at all times while construction work is in progress. The Competent Person may be assigned subcontractor personnel.

1.6 BASIC CONTRACT PREPERFORMANCE CONFERENCE MEETING AND TASK ORDER PRECONSTRUCTION MEETINGS

1.6.1 The Contractor shall:

1.6.1.1 Schedule with the Contracting Officer a Contract Preperformance Conference Meeting within 15-calendar days after award of this contract.

1.6.1.2 The Preperformance Conference Meeting will be conducted by the Contracting Officer. The purpose of the Contract Preperformance Conference Meeting is to develop a partnership, to discuss and develop a mutual understanding of the management and administration procedures, to discuss the roles of management and key personnel's and their responsibilities, to include planning and estimating, quality control management, safety management and enforcement, issuance of task orders, scheduling, programming, execution of work, and environmental policies.

1.6.1.3 Submit **ALL** contract submittals for review and approval on or before the scheduled date of the Contract Preperformance Conference Meeting.

1.6.1.4 The Contractor shall not mobilize nor perform any work until after the Contract Preperformance Conference Meeting has been conducted and all submittals have been reviewed and accepted by the Contracting Officer.

1.6.2 Task Order Preconstruction Meetings

1.6.2.1 The Contractor shall schedule Task Order Preconstruction Meetings with the Contracting Officer within 15-calendar days after of a task order.

1.6.2.2 The Contractor shall submit a Work Plan, Work Schedule and all other task order specific submittals at the time the meeting is conducted. The Work Plan shall take into consideration all environmental concerns as specified in the issued CATX or DM.

1.6.2.3 The Contractor shall not mobilize nor perform any work until after the Task Order Preconstruction Meeting has been conducted and all task order specific submittals have been reviewed and accepted by the Contracting Officer.

1.7 PARTNERING

1.7.1 Informal: To most effectively accomplish this contract, the Government requires the formation of a cohesive partnership with the Contractor and its subcontractors. The partnership will draw on the strength of each organization in an effort to achieve a quality project done right the first time, within the budget, on schedule, and without any safety mishaps. This level of partnering discusses partnering concepts and benefits, and should become a part of the preconstruction conference. The Initial Informal Partnering Session will be conducted and facilitated using electronic media (a video and accompanying forms) provided by the Contracting Office. The senior Government representative and senior Contractor representative present will jointly host the partnering sessions. Partnering sessions shall be held on a semi-annual basis at Marine Corps Base, Camp Pendleton, Building 2291, Facilities Support Contracts Division Conference Room. The participants shall bear their own costs for meals, lodging, and transportation associated with partnering.

1.7.1.1 It is the responsibility of the Contractor to obtain email addresses for notification of all participants. The Contractor is responsible for scheduling the meeting (date and time) and for sending out in advance an agenda of the topics of discussion to be discussed at the meeting.

1.7.1.2 Invitees include the Contracting Officer, and the respective Activity's Facilities Engineering and Acquisition Department management personnel.

1.8 ELECTRONIC MAIL (E-MAIL) ADDRESS

1.8.1 The Contractor shall establish and maintain electronic mail (e-mail) capability along with the capability to open various electronic attachments in Microsoft applications, Adobe Acrobat, and other formats acceptable to and used by the Government. Within 15-calendar days after contract award of this contract, the Contractor shall submit to the Contracting Officer and Contracting Officer's Representative the e-mail addresses of all management personnel for purposes of electronic communications. The communication highway includes, but is not limited to, sending contract documents, invoice information, request for proposals (RFP), request for information (RFI), reports, other requests, and correspondence. The Contracting Officer and Contracting Officer's representative may also use email to notify the Contractor of Base access conditions when emergency conditions warrant, such as inclement weather, terrorist threats, etc. Multiple e-mail addresses of personnel will not be allowed.

1.8.2 It is the Contractor's responsibility to make timely distribution of all Contracting Officer initiated e-mail within their own organization, including field offices. The Contractor shall submit within five (5) calendar days any changes to personnel email addresses to the Contracting Officer.

1.9 REQUEST FOR INFORMATION (RFI)

1.9.1 The Contractor shall submit an Request for Information (RFI) whenever there are changes to approved Task Order Plan/Work Order Plan and site specific record shop drawings. The Contractor shall submit a copy of the RFI to the Contracting Officer and Contracting Officers Representative for review. The RFI shall provide detailed information for the proposed change to include why the change is necessary, a work plan, and a quotation with the applicable RS Means prepriced and non-prepriced lines. The Contracting will make the final determination whether or not if the change is warranted. The Contracting Officer will follow up with a modification to the task order if the change is determined to be warranted.

1.9.1.2 The Contractor will be given a notice to proceed for changes that are no cost to the Government and which have been determined to be necessary to continue forward with the construction operations.

1.10 GOVERNMENT-FURNISHED PROPERTY, MATERIALS AND SERVICES

1.10.1 Marine Corps Camp Pendleton and Naval Weapons Station Seal Beach Fallbrook Detachment for Government-Furnished Facilities (GFF): If available, the Government may assign a designated space to the Contractor located in the 26 Area Laydown Lot. The Contractor may set up portable temporary office trailers and necessary storage containers at no cost to the Government. The temporary office trailers and containers shall be maintained in a sightly appearance. The space shall be secured by 6-foot high chain link fence with gates that can be locked. The security fencing shall be installed at no cost to the Government. The Contractor shall attach, at minimum, a 2' x 2' professionally fabricated metal sign with the company name, address, and emergency contact telephone number, to the chain link fence or on the portable temporary office trailer. The

Contractor shall be responsible and accountable for maintaining the space, to include taking the necessary actions to prevent fire hazards, odors, and vermin. The Contractor shall perform landscape maintenance as part of the agreement to occupy the space. Wastewater and refuse collection services for the assigned space shall be provided by the Contractor. The Contractor shall obtain written approval from the Contracting Officer prior to making any modifications or alterations to the space or to available utilities. Any such modifications or alterations approved by the Government will be made at the expense of the Contractor. At the completion of the contract the space shall be returned to the Government free of excess materials, free of vegetation and free of all other debris.

1.10.2 **Marine Corps Air Station Miramar for Government-Furnished Facilities (GFF):** On site laydown area(s) for contractor's site trailer, and materials and equipment storage must remain within the construction limits of the contract. If insufficient space is available, the contractor can request additional space from the Public Works Officer, through the Contracting Officer, site(s) within the station's undesignated laydown areas. This area may be up to three or more miles from the construction site.

10.2 **Government-Furnished Materials (GFM):** The Government will not furnish materials in the performance of this contract.

10.3 **Government-Furnished Equipment (GFE):** The Government will not furnish equipment in the performance of this contract.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End Section --

SECTION 01 32 01.00 20

PROJECT SCHEDULE

08/08

PART 1 GENERAL

1.1 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Work Plan and Construction Schedule, for each task order and project specific; GA, KO, PO

1.2 ACCEPTANCE

1.2.1 The Contractor shall submit a Work Plan and Construction Schedule to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order. The Contractor shall not mobilize on a project site nor begin work until the submittal has been reviewed and approved. The Construction Schedule submitted in the form of a Bar Chart in accordance with the terms in Contract Clause "FAR 52.236-15, Schedules for Construction Contracts."

1.3 SCHEDULE FORMAT

1.3.1 Bar Chart Schedule: The Bar Chart shall show submittals, government review periods, material/equipment delivery, utility outages, on-site construction scheduling, quality control inspections, testing, and closeout activities. The Bar Chart shall be developed in an electronic format compatible with the Government's software programs.

1.4 UPDATED SCHEDULES

1.4.1 Update the Construction Schedule at bi-monthly intervals or when the schedule has been revised. The updated schedule shall be kept current, reflecting actual activity progress and a plan for completing the remaining work. Submit the update or revised Construction Schedule to the Contracting Officer and Contracting Officer's Representative bi-monthly while work is in progress.

1.4.2 Submit two copies of material and equipment that is on order that may delay progress, to include original invoice from the ordering vendor, date of the order and confirmation of delivery dates. Submit the copies to the Contracting Officer and Contracting Officer's Representative at the time the Construction Schedule is submitted for review. Submit updated information as part of the updated bi-monthly Construction Schedule.

1.5 CORRESPONDENCE AND TEST REPORTS

1.5.1 All correspondence (e.g., letters, Requests for Information (RFIs), e-mails, meeting minute items, Contractor Daily Production Reports Quality Control Reports, material delivery tickets, photographs, etc. shall reference the scheduled activities that are being addressed.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not used.

-- End Section --

SECTION 01 33 00

SUBMITTAL PROCEDURES

02/10

PART 1 GENERAL

1.1 SUMMARY

The Contracting Officer may request submittals in addition to those specified in this contract and contract task order when deemed necessary to adequately describe the work covered in the respective sections.

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

Each submittal is to be complete and in sufficient detail to allow ready determination of compliance with contract requirements.

Contractor's Quality Control (CQC) System Manager shall check and approve all items prior to submittal and stamp, sign, and date indicating action taken. 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.

Submittals requiring Government approval are to be scheduled and made prior to the acquisition of the material or equipment covered thereby. Pick up and dispose of samples not incorporated into the work in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

1.1.1 Record Shop Drawings: When required as stated in a task order Statement of Intent, the Contractor shall develop and submit Record Shop Drawings. The Record Shop Drawings shall be developed by a State of California registered and licensed Architectural and Engineering firm. The Record Shop Drawings shall be stamped by the design professional of record prior to submission to the Contracting Officer and Contracting Officer's Representative. The Government, through negotiations, will pay for the service using R.S. Means Line Item 01 11 31.10.

1.2 DEFINITIONS

1.2.1 Submittal Descriptions (SD): Submittals requirements are specified in the technical sections. Submittals are identified by Submittal Description (SD) numbers and titles as follows:

SD-01 Preconstruction Submittals

- Submittals which are required prior to start of construction (work), issuance of contract notice to proceed, commencing work on site, or the start of the next major phase of the construction on a multi-phase contract, includes schedules, tabular list of data, or tabular list including location, features, or other pertinent information

regarding products, materials, equipment, or components to be used in the work. Preconstruction submittals include SD-01 through SD-11.

- Include the following as part of the Preconstruction submittals:
 - Certificates of insurance
 - Surety bonds
 - List of proposed Subcontractors
 - List of proposed products
 - Construction Progress Schedule
 - Network Analysis Schedule (NAS)
 - Submittal Register
 - Health and Safety Plan
 - Work Plan
 - Quality Control(QC) Plan
 - Environmental Protection Plan

SD-02 Shop Drawings

- Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.
- Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.
- Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

- Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials, systems or equipment for some portion of the work.
- Samples of warranty language when the contract requires extended product warranties.

SD-04 Samples

- Fabricated or unfabricated physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or product and establish standards by which the work can be judged.
- Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

SD-05 Design Data

- Design calculations, mix designs, analyses or other data pertaining to a part of work.

- Design submittals, design substantiation submittals and extensions of design submittals.

SD-06 Test Reports

- Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing shall have been within three years of date of contract award for this contract.)
- Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work.
- Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.
- Investigation reports.
- Daily logs and checklists.
- Final acceptance test and operational test procedure.

SD-07 Certificates

- Statements printed on the manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Shall be dated after award of project contract and clearly name the project.
- Document required of Contractor, or of a manufacturer, supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.
- Confined space entry permits, when applicable.
- Text of posted operating instructions.

SD-08 Manufacturer's Instructions

- Preprinted material describing installation of a product, system or material, including special notices and Material Safety Data sheets concerning impedances, hazards and safety precautions.

SD-09 Manufacturer's Field Reports

- Documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm

compliance with manufacturer's standards or instructions. The documentation shall be signed by an authorized official of a testing laboratory or agency and shall state the test results; and indicate whether the material, product, or system has passed or failed the test.

- Factory test reports.

SD-10 Operation and Maintenance Data

- Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel, including manufacturer's help and product line documentation necessary to maintain and install equipment. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.
- This data is intended to be incorporated in an operations and maintenance manual or control system.

SD-11 Closeout Submittals

- Documentation to record compliance with technical or to establish an administrative mechanism.
- Submittals necessary to properly close out a construction contract. Such as, as-built shop record shop drawings, manufacturer's operations and maintenance manuals, preventive maintenance plans and schedules, workmanship warranty and most favorable manufacturer's warranty, etc.

1.1.3 Approving Authority: Contracting Officer is authorized to accept submittals. The Contracting Officer's appointed Contracting Officer's Representative will assist the Contracting Officer in the review of the submitted submittals and will recommend the submittals be accepted by the Contracting Officer if found to be acceptable. Note: It is the responsibility of the Contractor's Quality Control Manager to review and approve submittals prior to submitting the submittals to the Contracting Officer.

1.1.4 Work: As used in this section, on 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.

1.3 SUBMITTALS

1.3.1 Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

- Submit three hard copies of the contract required submittals as specified in each contract section within 15-calendar days after award of this contract. The submittals shall be assembled in contract numerical sequence and tabular format, to include an index identifying the contract sections and each required submittal. Submit three copies of the approved submittals on CD to the Contracting Officer's Representative within five calendar days after the submittals have been approved.
- Submit three hard copies of task order required submittals within 15-calendar days after award of a task order in three ring recycled binders. The submittals shall be assembled in contract numerical sequence and tabular format, to include an index identifying the contract sections and each required submittal. Submit three copies of the approved submittals on CD to the Contracting Officer's Representative within five calendar days after the submittals have been approved.
- Closeout submittals shall be submitted within five (5)calendar days after the "Final Acceptance Inspection" for review and acceptance by the Contracting Officer. Submit four copies of the accepted Closeout submittals on CD to the Contracting Officer's Representative within five (5) calendar days after the submittals have been approved.

1.3.2 The submittals copied to CD shall be compatible with the Governments software.

1.4 SUBMITTAL CLASSIFICATION

1.4.1 Submittals are classified as follows:

1.4.1.1 Designer of Record Approved (DA): Designer of Record (DOR) approval is required for design changes, critical materials, any deviations from the contract required submittals, the accepted proposal, or the equipment whose compatibility with the entire system shall be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "Shop Drawings." The Contractor shall submit to the Contracting Officer three of copies of the DOR approved submittals 15-calendar days prior to incorporating any item or design into a construction project. The Contracting Officer shall review and approve of all DOR approved submittals that deviate from the requirements found in the contract sections and the accepted contract submittals. Incorporation of items or design shall not begin until Contracting Officer approval. Generally, design submittals should be identified as SD-05 Design Data submittals.

1.4.1.2 Government Acceptance (GA): Government acceptance is required for all design changes, critical materials, deviations, equipment whose compatibility with the entire system shall be checked, and other items as designated by the Contracting Officer. Contracting Officer approval is required for any deviations from the technical requirements found in this contract and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "Shop Drawings."

1.4.1.3 Government Conformance Review of Design (CR): The Government will review all intermediate submittals for conformance with the technical requirements of this contract. Review will be only for conformance with the applicable codes, standards and contract requirements.

1.4.2 Designer of Record Approved/Government Conformance Review (DA/CR)

1.4.2.1 Deviations to the Accepted Design: Designer of Record approval and the Government's concurrence are required for any proposed deviation from accepted designs which complies with the contract before the Contractor is authorized to proceed with material acquisition or installation. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "Shop Drawings." If necessary to facilitate the project schedules, the Contractor and the DOR may discuss a submittal proposing a deviation with the Contracting Officer and Contracting Officer's Representative prior to officially submitting it to the Government. However, the Contracting Officer reserves the right to review the submittal before providing an opinion, if deemed necessary. In any case, the Contracting Officer will not formally agree to or provide a preliminary opinion on any deviation without the DOR's approval or recommended approval. The Contracting Officer reserves the right to non-concur with any deviation from the design, which may impact furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and concurred design.

1. Substitutions

- a. Unless prohibited or provided for elsewhere in this contract, where the accepted contract proposal named products, systems, materials or equipment by manufacturer, brand name and/or by model number or other specific identification, and the Contractor desires to substitute manufacturer or model after award, submit a requested substitution for Contracting Officer concurrence. Include substantiation, identifying information and the DOR's approval, as meeting the contract requirements and that it is equal in function, performance, quality and salient features to that in the accepted contract proposal.

1.4.3 Designer of Record Approved/Government Approved (DA/GA): In addition to the above stated requirements for proposed deviations to the accepted design, both Designer of Record and Contracting Officer Approval and, where applicable, a contract modification are required before the Contractor is authorized to proceed with material acquisition or installation for any proposed deviation to this contract, which constitutes a change to the contract terms. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "Shop Drawings". The Government reserves the right to accept or reject any such proposed deviation at its discretion.

1.4.4 Information Only: Submittals not requiring Contracting Officer approval will be for information only.

1.5 FORWARDING SUBMITTALS REQUIRING GOVERNMENT APPROVAL

1.5.1 Submittals Required from the Contractor

1.5.1.1 The Contractor shall submit all of the submittals as required in each contract section as specified in paragraph 1.3.1 of this section. Do not mobilize, stage equipment or materials, nor begin work this contract or on any task order until all of the submittals have been accepted and approved by the Contracting Officer. Submit complete and legible in accordance with paragraph 1.2 of this section.

1.5.1.2 Operations and Maintenance Manual and Preventive Maintenance Plan

- a. The Contractor shall submit three hard copies of the manufacturer's Operations and Maintenance Manual to the Contracting Officer for review and acceptance within five-calendar days after a task order "Final Acceptance Inspection" has been performed. When specified in a task order, the Contractor shall develop a detailed Preventive Maintenance Plan, to include a Preventive Maintenance checklist matrix, and submit three hard copies of the Preventive Maintenance Plan to the Contracting Officer for review and acceptance within five-calendar days after a task order "Final Acceptance Inspection" has been performed.
- b. Submit four copies of the accepted Operations and Maintenance Manual and Preventive Maintenance Plan on CD to the Contracting Officer's Representative within three-calendar days of the submittals being accepted by the Contracting Officer.
- c. In the event the Contractor fails to deliver Operations and Maintenance Manual and Preventive Maintenance Plan to the Contracting Officer within the time frame specified, the Contracting Officer may withhold from payment up to 10 percent of the total price of the of the Task Order. The Contractor shall be paid in full once the Operations and Maintenance Manual and Preventive Maintenance Plan has been received and approved.

1.6 PREPARATION

1.6.1 Transmittal Form: Transmit each submittal to office of approving authority. Transmit submittals with transmittal form prescribed by Contracting Officer and standard for this contract. On the transmittal form identify Contractor, indicate date of submittal, and include information prescribed by transmittal form and required in paragraph entitled "Identifying Submittals." Process transmittal forms to record actions regarding samples and panels.

1.6.2 Identifying Submittals

1.6.2.1 When submittals are provided by a Subcontractor, the Contractor's Quality Control Manager shall prepare, review and stamp with Contractor's approval all specified submittals prior to submitting for Government approval.

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

- a. Project title and location (Location will be Activity and Facility number).
- b. Construction contract number and task order number.
- c. Name, address, and telephone number of subcontractor, supplier, manufacturer and any other subcontractor associated with the submittal.
- d. Section number of the specification section by which submittal is required.
- e. Submittal description (SD) number of each component of submittal.

- f. When a resubmission, add alphabetic suffix on submittal description, for example, submittal 18 would become 18A, to indicate resubmission.
- g. Product identification and location in project.

1.6.3 Format for SD-02 Shop Drawings

1.6.3.1 All record drawings shall be produced in an AutoCAD format that is compatible with the current Government AutoCAD version. Hard copies of the AutoCAD drawings shall be reproduced onto U.S. Standard Engineering 22" x 44" drawing size paper and shall become shop drawings. The record drawings shall be reproduced onto Mylar paper.

1.6.4 Format of SD-03 Product Data and SD-08 Manufacturer's Instructions

1.6.4.1 Present product data for each submittal requirement found in the technical sections in this contract as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

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

1.6.4.3 Supplement product data with material prepared for contract task order specific projects to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for project, with information and format as required for submission of SD-07 Certificates.

1.6.4.4 Provide product data in standard dimensions with metric dimensions in parenthesis. Where product data are included in preprinted catalogs with English units only, submit metric dimensions on separate sheet.

1.6.4.5 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. Should manufacturer's data require supplemental information for clarification, submit as specified for SD-07 Certificates.

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

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

1.6.4.8 Submit manufacturer's instructions prior to installation.

1.6.5 Format of SD-04 Samples

1.6.5.1 Submit samples in sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately 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 of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
- f. Color Selection Samples: 2-inches 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. 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.
- h. Reusable Samples: Incorporate returned samples into work only if so specified or indicated. Incorporated samples are to be in undamaged condition at time of use.
- i. Recording of Sample Installation: Note and preserve the notation of area constituting sample installation but remove notation at final cleanup of project.
- j. When color, texture or pattern is specified by naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.

1.6.6 Format of SD-05 Design Data and SD-07 Certificates

1.6.6.1 Submit design data and certificates in 8-1/2 x 11 inches for each submittal requirement found in the technical sections in this contract as a complete, bound volume. Include table of contents, listing page and catalog item numbers for product data.

1.6.7 Format of SD-06 Test Reports and SD-09 Manufacturer's Field Reports

1.6.7.1 Submit test reports and manufacturer's field reports in 8-1/2 x 11 inches for each submittal requirement found in the technical sections in this contract as a complete, bound volume.

1.6.7.2 Indicate by prominent notation, each report in the submittal. Indicate specification number and paragraph number to which it pertains.

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

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

1.6.9 Format of SD-01 Preconstruction Submittals and SD-11 Closeout Submittals

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

1.6.9.2 Provide all dimensions in administrative submittals in metric. Where data are included in preprinted material with English units only, submit metric dimensions on separate sheet.

1.7 QUANTITY OF SUBMITTALS

1.7.1 Where submittals are required, the submitted submittals will be reviewed by the Contracting Officer and the Contracting Officer's Representative. The initial review process by the Contracting Officer will be completed within 10-working days from the day the submittal(s) were received from the Contractor. Re-submitted submittals will be completed within 10-working days from the day the submittal(s) were received from the Contractor.

1.7.1.1 Upon acceptance of the submittal(s), one copy of each accepted submittal signed by the Contracting Officer will be returned to the Contractor, one copy of each accepted submittal will be retained by the Contracting Officer and one copy of each accepted submittal will be retained by the respective Activity's Contracting Officer's Representative. Where submittals are required on CD, The Contractor shall deliver the copies to the Contracting Officer's Representative.

1.7.2 SD-01 Preperformance and Preconstruction Submittals

1.7.2.1 Submit three hard copies of each submittal for review and acceptance by the Contracting Officer. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer's Representative.

1.7.3 SD-02 Shop Drawings

1.7.3.1 Submit three sets of record shop drawings for review and acceptance by the Contracting Officer. The Contractor shall copy the accepted as-built drawings onto CD. The CD shall have on it files of the as-builts in pdf format and in the respective Activity's version of AutoCADD. Deliver four copies of the CD's to the Contracting Officer's Representative within three-calendar days after the "Final Acceptance Inspection."

1.7.3.2 As-Builts/Record Drawings: The drawings shall be on a NAVFAC drawing template, and contain as a minimum the following information:

9. Official Navy Title Block Template using one of the following:
 - MCB Camp Pendleton
 - NWS Seal Beach Fallbrook detachment
 - MCAS Miramar

➤ MCRD San Diego

10. Title of Project
11. Sheet Size (A,B,C,D,E, OR F)
12. NAVFAC number on each drawing
13. No duplicate NAVFAC numbers
14. NAVFAC numbers must be in sequential order with “Not Used”
15. NAVFAC numbers listed on title page
16. Sheet Number to be sequential (102 of 200)
17. Contract Number on each drawing
18. Drawing Number (T-1, A-1)
19. Scale bar

1.7.4 SD-03 Product Data

1.7.4.1 Submit three hard copies of each manufacturer’s product data to the Contracting Officer for review and acceptance. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer’s Representative.

1.7.5 SD-04 Samples

1.7.5.1 Submit three samples or three sets of samples showing range of variation of each required material and product for review and acceptance of the Contracting Officer’s Representative.

1.7.6 SD-05 Design Data

1.7.6.1 Submit three hard copies of each manufacturer’s design data for review and acceptance by the Contracting Officer. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer’s Representative.

1.7.7 SD-06 Test Reports

1.7.7.1 Submit three hard copies of each manufacturer’s product test reports for review and accepted by the Contracting Officer. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer’s Representative.

1.7.8 SD-07 Certificates

1.7.8.1 Submit three hard copies of each manufacturer’s certificates for review and acceptance by the Contracting Officer. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer’s Representative.

1.7.9 SD-08 Manufacturer’s Instructions

1.7.9.1 Submit three hard copies of each manufacturer’s product instructions to the Contracting Officer for review and acceptance. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer’s Representative.

1.7.10 SD-09 Manufacturer’s Field Report

1.7.10.1 Submit documentation of the testing and verification actions taken by manufacturer's representative at the job site, in the vicinity of the job site, or on a sample taken from the job site, on a portion of the work, during or after installation, to confirm compliance with manufacturer's standards or instructions. The documentation must be signed by an authorized official of a testing laboratory or agency and must state the test results; and indicate whether the material, product, or system has passed or failed the test Factory test reports. Submit the documentation as part of the previous days Contractor's Daily Production Report.

1.7.11 SD-10 Operation and Maintenance Data

1.7.11.1 Submit three hard copies of each Operations and Maintenance (O&M) Manual and Preventive Maintenance Plan to the Contracting Officer for review and approval. The Contractor shall copy the accepted submittals onto CD and deliver four copies to the Contracting Officer's Representative.

1.7.12 SD-11 Closeout Submittals

1.7.12.1 Submit three hard copies to the Contracting Officer for review and acceptance. The Contractor shall copy the approved submittals onto CD and deliver four copies to the Contracting Officer's Representative.

1.8 VARIATIONS / SUBSTITUTION REQUESTS

1.8.1 Variations from the contract technical requirements require Contracting Officer approval pursuant to contract Clause FAR 52.236-21 and will be considered where advantageous to Government.

1.8.2 Considering Variations

1.8.2.1 Discussion with Contracting Officer prior to submission will help ensure functional and quality requirements are met and minimize rejections and re-submittals. When contemplating a variation which results in lower cost, consider submission of the variation as a Value Engineering Change Proposal (VECP).

1.8.2.2 Specifically point out variations from contract requirements in transmittal letters. Failure to point out deviations may result in the Contracting Officer requiring rejection and removal of such work at no additional cost to the Government.

1.8.3 Proposing Variations: When proposing variation, deliver a written request on company letterhead to the Contracting Officer, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to Government. Proposed substitute material and equipment that meets the requirements as specified in the technical sections of this contract and which can be purchased at a lower cost at a benefit to the Contractor will not be accepted. In addition to documentation required for variation, include the submittals required for the item. Clearly mark the proposed variation in all documentation.

1.8.5 Warranting That Variations Are Compatible: When delivering a variation for approval, Contractor warrants that this contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of work.

1.8.6 Review Schedule Is Modified: In addition to normal submittal review period, a period of 10-working days will be allowed for consideration by the Contracting Officer of submittals with variations.

1.9 SUBMITTAL REGISTER

1.9.1 Prepare and maintain submittal register, as the work progresses. Do not change data which is output in columns (c), (d), (e), and (f) as delivered by Government; retain data which is output in columns (a), (g), (h), and (i) as approved. A submittal register showing items of equipment and materials for which submittals are required by the specifications is provided in Appendix "A." This list may not be all inclusive and additional submittals may be required. The Government will provide the initial submittal register in electronic format with the following fields completed, to the extent that will be required by the Government during subsequent use.

- a. Column (c): Lists specification section in which submittal is required.
- b. Column (d): Lists each submittal description (SD No. and type, e.g. SD-02 Shop Drawings) required in each specification section.
- c. Column (e): Lists one principal paragraph in specification section where a material or product is specified. This listing is only to facilitate locating submitted requirements. Do not consider entries in column (e) as limiting project requirements.
- d. Column (f): Indicate approving authority for each submittal.

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

1.9.2 Use of Submittal Register

1.9.2.1 Submit submittal register. Submit with contract specific required submittals as part of the Quality Control Plan. Verify that all submittals required that are listed a contract specific are accounted for and add missing submittals. Coordinate and complete the following fields on the register submitted with the Quality Control Plan:

- a. Column (a) Activity Number: Activity number from the project schedule.
- b. Column (g) Contractor Submit Date: Scheduled date for approving authority to receive submittals.
- c. Column (h) Contractor Approval Date: Date Contractor needs approval of submittal.
- d. Column (i) Contractor Material: Date that Contractor needs material delivered to Contractor control.

1.9.2.2 The above requirement is applicable to task order specific submittal requirements with the exception that a Quality Control Plan is not required.

1.9.3 Contractor Use of Submittal Register

1.9.3.1 Update the following fields in the Government-furnished submittal register program or equivalent fields in program utilized by Contractor with each submittal throughout contract.

- a. Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.
- b. Column (j) Action Code (k): Date of action used to record Contractor's review when forwarding submittals to QC.
- c. Column (l) List date of submittal transmission.
- d. Column (q) List date approval received.

1.9.4 Approving Authority Use of Submittal Register

1.9.4.1 Update the following fields in the Government-furnished submittal register program:

- a. Column (b) Transmittal Number: Contractor assigned list of consecutive numbers.
- b. Column (l) List date of submittal receipt.
- c. Column (m) through (p) List Date related to review actions.
- d. Column (q) List date returned to Contractor.

1.9.5 Contractor Action Code and Action Code

1.9.5.1 Entries for columns (j) and (o), are to be used are as follows (others may be prescribed by Transmittal Form):

- a. NR - Not Received
- b. AN - Approved as noted
- c. A - Approved
- d. RR - Disapproved, Revise, and Resubmit

1.9.6 Copies Delivered to the Government

1.9.6.1 Submit three hard copies of the submittal register to the Contracting Officer's Representative for review and acceptance. Upon acceptance by the Contracting Officer, one copy of each accepted submittal will be returned to the Contractor. The Contractor shall copy the approved submittals onto CD and deliver three copies to the Contracting Officer's Representative.

1.10 SCHEDULING

1.10.1 Within 15-calendar days after award of this contract, submit to the Contracting Officer's Representative all of the contract specific required submittals for review and acceptance. Failure to submit the submittals as specified herein may be probable cause to give the Contractor lower performance evaluation ratings.

1.10.1.1 Coordinate scheduling, sequencing, preparing and processing of submittals to coincide with the scheduled Contract Preperformance Conference Meeting.

1.10.1.2 All of the contract submittals specified in the contract sections herein shall be listed on the register. If a submittal is called for, 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 sections, but which have been omitted from the register or marked "N/A".

1.10.1.3 Except as specified otherwise, allow review period, that includes at least five working days for the submittals to be reviewed by the Contractor's QC Manager prior to submitting the submittals to the Contracting Officer and Contracting Officer's Representative. Allow 15 calendar days for review and approval by the Contracting Officer. Period of review for submittals with Contracting Officer approval begins when the complete submittal package is received from Contractor's QC Manager.

1.10.1.4 For submittals requiring review by fire protection engineer, allow review period, beginning when the Contracting Officer receives the submittal package from the Contractor's QC Manager, of 30-calendar days for review, approval and return of submittal to the Contractor.

1.10.2 Reviewing, Certifying, Approving Authority: The QC Manager is responsible for reviewing and certifying that all submittals are in compliance with the contract section requirements and each awarded task order requirement. Approving authority for signature on submittals is QC Manager. In each contract section there is a requirement for submittals. A notation of "GA, RO, PO" following a submittal item indicates the there is a submittal requirement who the reviewing authority is.

1.10.3 Constraints

1.10.3.1 Conform to provisions of this section, unless explicitly stated otherwise for submittals listed or specified in this contract.

1.10.3.2 Submit complete submittals as specified in each contract section.

1.9.4 Quality Control Manager Responsibilities

1.10.4.1 Note date on which submittal was received from the subcontractor(s) on each submittal.

1.9.4.2 Review each submittal and verify that the submittal is in conformance and compliance with the contract sections specified in this contract.

1.10.4.3 Act on submittals, determining appropriate action based on review of each submittal.

- a. The QC Manager shall take appropriate action on submittal from the possible actions defined in paragraph entitled, "Actions Possible."
- b. When Contracting Officer is the approving authority or when variation has been proposed, forward submittal to the Contracting Officer and Contracting Officer's Representative with a certifying statement or return submittal marked "not reviewed" or "revise and resubmit" as appropriate. The QC organization's review of submittal determines appropriate action.

1. Ensure that material information and data is clearly legible.
2. Stamp each sheet of each submittal with the QC Manager's certifying statement or approving statement, except that data submitted in bound volume or on one sheet printed on two sides may be stamped on the front of the first sheet only.
 - a. When approving authority is Contracting Officer, the QC Manager shall certify the submittals forwarded to Contracting Officer with the following certifying statement:

"I hereby certify that the (equipment) (material) (article) shown and marked in this submittal is that proposed to be incorporated with contract Number [____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is submitted for Government approval.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Certified by QC Manager _____, Date _____ "
(Signature)

- b. When approving authority is QC Manager, QC Manager will use the following approval statement when returning submittals to Contractor as "Approved" or "Approved as Noted."

"I hereby certify that the (material) (equipment) (article) shown and marked in this submittal and proposed to be incorporated with contract Number [____], is in compliance with the contract drawings and specification, can be installed in the allocated spaces, and is approved for use.

Certified by Submittal Reviewer _____, Date _____
(Signature when applicable)

Approved by QC Manager _____, Date _____ "
(Signature)

3. Sign certifying statement or approval statement. The QC Manager that is designated in the approved QC Plan is the person signing certifying statements. The use of original ink for signatures is required. Stamped signatures are not acceptable.
4. Update submittal register as submittal actions occur and maintain the submittal register at project site until final acceptance of all work by Contracting Officer.
5. Retain a copy of approved submittals at project site, including Contractor's copy of approved samples.

1.11 GOVERNMENT APPROVING AUTHORITY

1.11.1 When the approving authority is the Contracting Officer, the Government will:

- a. Note the date on which submittal was received from QC Manager.

- b. Review the specified contract section submittals for approval within 15-calendar days after receipt of them from the QC Manager and for task order specific submittals within five (5) calendar days after receipt of them from the QC Manager. Re-submitted submittals will have the same review time as stated above.
- c. Identify returned submittals with one of the actions defined in paragraph entitled "Review Notations" and with markings appropriate for action indicated.

1.11.1.1 Upon completion of review of submittals requiring Contracting Officer acceptance, stamp and date approved submittals, a minimum of two copies of the accepted submittals will be retained by the Contracting Officer and one copy of the submittal will be returned to the Contractor.

1.11.2 Review Notations: Contracting Officer review will be completed and return a copy of the approved submittals to the QC Manager with the following notations:

1.11.2.1 "Approved" or "Rejected." The Contractor is not allowed to mobilize, stage materials and equipment, and begin work until all of the submittals have been marked "Approved." The term "Accepted" may be used in lieu of "Approved."

1.11.2.2 Submittals marked "Rejected", "Revise and resubmit," indicate noncompliance with the contract requirements or that the submittal is incomplete. Resubmit with appropriate changes.

1.12 REJECTED SUBMITTALS

1.12.1 Contractor shall make corrections as specified by the Contracting Officer. If the Contractor considers any correction or notation on the returned submittals to constitute a change to the contract specifications; a written explanation is to be submitted to the Contracting Officer as required under the clause entitled, "Changes." Failure to point out deviations may result in the Contracting Officer requiring rejection of the submittal at the Contractor's expense.

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

1.13 APPROVED SUBMITTALS

1.13.1 The Contracting Officer's approval of submittals is not be construed as a complete check, and indicates only that the general method of construction, materials, detailing and other information are satisfactory. Approval or acceptance will not relieve the Contractor of the responsibility for any error which may exist, e.g. the Contractor bears all responsibility for verifying the dimensions, the design, and the satisfactory construction of all work is correct. After submittals have been approved or accepted by the Contracting Officer and Contracting Officer's Representative, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.14 ACCEPTED SAMPLES

1.14.1 Acceptance of a sample is only for the characteristics or use named in such acceptance and is not be construed to change or modify any of the contract technical requirements. Before submitting samples, the QC Manager shall assure that the materials or equipment will be available

in quantities required throughout the duration of this contract. No change or substitution will be permitted after a sample has been accepted.

1.14.2 Match the accepted samples for materials and equipment incorporated in the work.. Match as closely as possible the samples of the materials with the existing in-place materials so as not to create a contrast of materials. If requested, accepted samples, including those which may be damaged in testing, will be returned to the Contractor, at their expense. Samples not accepted will also be returned to the Contractor at their expense, if so requested.

1.14.3 Failure of any materials or equipment to pass specified tests as found in the contract section specifications found in this contract will be sufficient cause for refusal or rejection for use under this contract. Government reserves the right to reject or disapprove any material or equipment which previously has proved unsatisfactory in service. Samples of various materials or equipment delivered on a task order project site or in place may be taken by the Contracting Officer for testing. Samples failing to meet the contract requirements will automatically void previous approvals. The Contractor shall replace such materials or equipment to meet contract technical requirements. Approval of the Contractor's samples by the Contracting Officer does not relieve the Contractor of their responsibilities under the contract.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

3.1 ACCEPTANCE OF MATERIALS AND EQUIPMENT AT THE PROJECT SITE

3.1.1 The QCM shall inspect all materials and equipment received on each task order project site to ensure they are in compliance with the approved task order submittals. The QCM shall indicate on the Contractor's Daily Production Report/Quality Control Report the materials and equipment that were received that day. The QCM shall sign the Contractor's Daily Production Report/Quality Control Report certifying that all materials and equipment received are in compliance.

-- End Section --

SECTION 01 35 26

GOVERNMENTAL SAFETY REQUIREMENTS 02/10

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z359.1	Safety Requirements for Personal Fall Arrest System, Subsystems and Components
ANSI A10.32	Fall Protection systems for Construction and Demolition Operations
ANSI A10.6	Demolition Operations
ANSI A10.32	Fall Protection systems for Construction and Demolition Operations
ANSI Z9.2	Fundamentals Governing the Design and Operation of Local Exhaust Systems
ANSI Z88.2	Respiratory Protection
ANSI Z358.1	Emergency Eyewash and Shower Equipment

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)

ASSE/SAFE A10.32	Fall Protection
ASSE/SAFE A10.34	Protection of the Public on or Adjacent to Construction Sites
ASSE/SAFE Z359.1	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components

ASME INTERNATIONAL (ASME)

ASME B30.22	Articulating Boom Cranes
ASME B30.8	Floating Cranes and Floating Derricks

AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM)

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1 Safety and Health Requirements Manual

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

29 CFR 1904 Recording and Reporting Occupational Injuries and Illnesses

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 1926 Safety and Health Regulations for Construction

29 CFR 1926.65 Hazardous Waste Operations and Emergency Response Subpart M, Fall Protection

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

UNITED FACILITIES CRITERIA (UFC)

UFC 3-560-01 Electrical Safety, O&M

1.2 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Site Safety and Health Officer (SSHO) resume and certifications, contract specific; GA, KO, PO
- Safety and Health Policy, to include a Site Specific Accident Prevention Plan (APP), contract specific; GA, KO, PO
- Competent Person, resume and certifications ,task order/project specific; GA, RO, PO
- Accident Prevention Plan (APP), task order/site specific; GA, KO, PO
- Activity Hazard Analysis (AHA) for each trade/task, task order/site specific; GA, KO, PO
- Crane Critical Lift Plan, task order/site specific; GA, KO, PO
- Fall Prevention Plan, task order/site specific; GA, KO, PO
- SSHO Daily Safety Inspection Report, task order/site specific; GA, RO, PO
- Traffic Control Plan, task order/site specific; GA, KO, PO
- Hazardous Energy Control Plan (Lockout/Tagout), task order/site specific; GA, KO, PO

SD-07 Certificates

- Hot Work Permit, task order/site specific; GA, KO, PO
- Forklift Operator Certification, if forklift is used on projects, maintain current, task order/site specific; GA, RO, PO
- Crane Operator License and Certification, task order/site specific; GA, KO, PO
- Certificate of Compliance (Crane), task order/site specific; GA, KO, PO
- Confined Space Entry Permit, as applicable, task order/site specific; GA, KO, PO

1.3 REGULATORY REQUIREMENTS

1.3.1 In addition to the detailed requirements included in the provisions of this contract, work performed shall comply with most current edition of the USACE EM 385-1-1, Federal and Great State of California OSHA and all other local safety regulations. Submit matters of interpretation of standards to the Contracting Officer for resolution before mobilization, staging of materials and equipment or commencing work.

1.4 SITE SAFETY AND HEALTH OFFICER QUALIFICATION AND RESPONSIBILITIES

1.4.1 Personnel Qualifications: Site Safety and Health Officer (SSHO) Personnel Qualifications: The SSHO is responsible for the overall safety and occupational health management, employee safety training and administration, and safety inspection and enforcement throughout the duration of this contract. The assignment of the SSHO contractually does not relieve the Contractor from regulatory safety requirement responsibility. The Contractor's designated Quality Control Manager

(QCM), acting under the SSHO's supervision, may have the collateral responsibility of enforcing safety on the project sites. The QCM may not be the SSHO. The designated QCM shall have completed and be certified in the applicable OSHA training and complete annual formal training as required of the SSHO. The SSHO or the designated QCM may, when multiple projects are in progress, roam from one project site to another project site within the Activities boundaries. The SSHO or designated QCM shall visit each project in progress on a daily basis, to enforce safety, document all safe and unsafe activities, and take corrective measures for unsafe working practices or conditions.

1.4.1.1 The SSHO shall meet the following Level 3 requirements:

1. A minimum of five (5)-years safety work on similar size projects;
2. Has completed the 30-hour 29 CFR 1926 OSHA Construction Safety Training Certificate Program completed within the last five (5) years, certificate required;
3. Has completed the 40-hour Army Corps of Engineers EM-385-1-1 Training Program, certificate required;
4. Has attended an average of 24-hours of annual formal safety training for each year for the past four (4) years.
5. Has completed the 29 CFR 1926 OSHA Construction Competent Person Safety Training within the last five (5) years, certificate required.
6. Successfully completed the Environmental Compliance Awareness Training (ECATT) Program, certificate required.

1.4.2 Personnel Duties

1.4.2.1 In addition to the duties required in EM 385-1-1, the SSHO or the designated QCM acting under the supervision of the SSHO shall perform the following:

1. Prior to start of work on a task order project conduct a safety meeting to discuss the trade specific Activity Hazard Analysis (AHA) with all Contractor and subcontractor personnel. Ensure that all new personnel on the project site receive this training prior to start of work. Document all personnel that receive the training by use of an attendance roster, to include the printed name, signature of each tradesman and the date training was received.
2. Conduct weekly safety and health inspections and maintain a written account of unsafe acts observed on the Safety Inspection Report which includes visits to all project sites inspected, date of inspection, identified hazards, recommended corrective actions, safety training conducted, estimated and actual dates of training and corrective action. Safety inspection documentation shall be submitted as an attachment to the Contractors' Daily Production Report and posted on the jobsite information board.
3. Attend the contract Preperformance Conference Meeting, all preconstruction task order meetings, partnering meetings, project preparatory phase meetings, and safety tailgate meetings.

4. Failure to actively manage and enforce the approved Safety Program may result in the dismissal of the Project Manager, On-Site Project Superintendent, SSHO and the QCM. Additionally, the Contracting Officer may direct the Contractor to stop work for failure to manage and enforce the approved Safety Program. The project work stoppage will remain in effect pending approval of a suitable replacement and all deficiencies found in the approved Safety Program have been corrected to the approval of the Contracting Officer. The Contractor will not be reimbursed for the costs associated with replacing personnel nor with the costs incurred to the Contractor as a direct result of a work stoppage.
5. The SSHO or designated QCM shall conduct daily safety inspections at each jobsite and shall submit a Safety Inspection Report attached to the Contractor's Daily Production Report. Document all unsafe conditions and corrective action to eliminate the unsafe conditions.

1.5 COMPETENT PERSON SAFETY QUALIFICATION AND RESPONSIBILITIES

1.5.1 A "Competent Person" means one who has successfully completed the Federal OSHA 30 Hour General Construction Training Certificate Program and who is capable of identifying existing and predictable hazards in the surroundings or working conditions, which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

1.5.2 The Contractor shall have at least one Competent Person on each project site at all times while work is in progress. The Competent Person shall report to the SSHO or QCM daily for all matters pertaining to project and job site safety. The Competent Person may be an employee of the Prime Contractor or an employee of a subcontractor and may have the title of Competent person as found in SECTION 01 30 00, ADMINISTRATIVE REQUIREMENTS, paragraph 1.5.3.

1.5.2.1 Each Competent Person shall possess on their person a current OSHA Construction Training wallet card and shall present it to the Contracting Officer or to the Contracting Officer's representative upon request.

1.5.2.2 The Competent Person shall conduct daily safety inspections of the job site and job site equipment and provide documentation of unsafe conditions and corrective actions taken to eliminate the unsafe conditions to the SSHO or QCM.

1.5.2.3 The Competent Person may be assigned, as a collateral duty, to conduct AHA training and other safety training as required.

1.6 REPORTS

1.6.1 Accident Reports

1.6.1.1 The Contractor shall conduct an accident investigation to establish the root cause(s) of an accident, complete the Navy Contractor Significant Incident Report (CSIR) form and provide the report to the Contracting Officer within 48-hours of the accident for recordable injuries and illnesses, and property damage accidents resulting in damages equal to or greater than \$2,000. The Contracting Officer will provide copies of any additional required or special forms.

1.6.2 Accident Notification: Notify the Contracting Officer immediately, but no later than two hours after an accident, for any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000. Information shall include the Contractor's name; contract title; type of contract; task order number, 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 (to include type of construction equipment used, PPE used, etc.). Preserve the conditions and evidence on the accident site until the Government investigation team arrives on-site and the Government investigation is completed.

1.7 PREPERFORMANCE CONFERENCE AND PRECONSTRUCTION MEETING

1.7.1 The Contractor's SSHO and QCM shall attend the contract Preperformance Conference meeting. One of the purposes of this meeting is to discuss health and safety concerns related to the type of work that will be performed as outlined in the technical sections of this contract, to discuss health and safety management, administration, organizational structure and expectations, review and discuss comments and concerns regarding the Safety and Health Plan (SHP) and Accident Prevention Plan (APP), the necessary requirements and development of AHA's, and other health and safety issues that may be of concern.

1.7.1.1 The Contractor shall submit the Contract Safety and Health Plan (SHP) and the Accident Prevention Plan (APP) at this meeting for further review and approval by the Contracting Officer.

1.7.2 The Contractor shall conduct a preconstruction safety meetings prior to the start of work on each task order or task order project, and shall conduct weekly tailgate safety meetings thereafter. Submit documentation, to include the date the safety meeting was conducted, a roster of attendees and the safety topics addressed. Attached the documentation on the following day's Contractor's Daily Production Report.

1.7.2.1 The Contractor and subcontractors shall develop and submit a site specific and task specific Activity Hazard Analysis (AHA) for each task order project to the Contracting Officer's Representative (COR) for review and approval. The Contractor shall not mobilize, stage materials or equipment, nor commence work until the AHA has been approved.

1.8 CONTRACT SAFETY AND HEALTH POLICY

1.8.1 A contract specific Site Safety and Health Plan shall be developed and submitted by the Contractor. The Site Safety and Health Plan shall include a contract site specific Accident Prevention Plan. The term "site" in this narrative shall mean within the boundaries of the respective Activity's premises. The Safety and Health Policy submitted document shall be developed and signed by the Contractors SSHO. The Safety and Health Plan shall be developed by addressing the Minimum Basic Outline for Accident Prevention Plans found in Appendix "A" of the EM-385-1-1. **Specific to Marine Corps Base Camp Pendleton:** The Contractor shall use FSC MCBCP's version of the "Accident Reporting" template when developing their Safety and Health Plan. Use the specific versions of the "Accident Reporting" template as required by the respective Activity. The Site Safety and Health Plan is a dynamic document, subject to change as the contract operations/execution change. The Site Safety and Health Plan will require modification to address changing and previously unidentified health and safety conditions. It is the Contractor's responsibility to ensure that the Site Safety and Health Plan is updated accordingly at no additional cost to the Government. Submit amendments to the Site Safety and Health Plan to the Contracting Officer's representative whenever the Site Safety and Health Plan has been updated.

1.8.1.1 The SSHO is held responsible for implementation, management and enforcement of the approved Site Safety and Health Plan.

1.8.2 The Contractor shall develop and submit a task order specific Accident Prevention Plan that addresses the specific health and safety hazards that will be encountered at the task order's project site. The task order specific APP shall supplement the approved contract Safety and Health Policy.

1.8.2.1 In addition to the required task order APP, the Contractor shall submit a trade specific/task specific Activity Hazard Analysis. The AHA shall be developed in accordance with the current edition of the Army Corps of Engineering Manual EM-385-1-1. The Contractor should not be developing or generating boiler plated AHA's for their subcontractors. It is the responsibility of each subcontractor to develop their own AHA and forward their AHA to the SSHO for review and approval.

1.8.3 The Contractor shall not mobilize or start work until the contract Site Safety and Health Plan has been approved by the Contracting Officer's Representative. The Contractor shall not mobilize or start work until the task order specific APP's and AHA's have been approved by the Contracting Officer's Representative.

PART 2 PRODUCTS

2.2 Trench Box

2.2.1 Trench boxes and spreaders shall be selected in accordance with OSHA'29 CPR Part 1926 Subpart P.

2.3 Steel Plate Bridging:

2.3.1 The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual).

<u>Trench Width</u>	<u>Minimum Plate Thickness</u>
10" (0.25 m)	1/2" (13 mm)
1'-11" (0.58 m)	3/4" (19 mm)
2'-7" (0.80 m)	7/8" (22 mm)
3'-5" (1.04 m)	1" (25 mm)
5'-3" (1.60 m)	1 1/4" (32 mm)

NOTE: For spans greater than 5'-3" (1.6 meters), a structural design shall be prepared by a California registered civil engineer.

PART 3 EXECUTION

3.1 CONSTRUCTION AND OTHER WORK

3.1.1 The Contractor shall comply with the approved Safety and Health Policy, APP's, AHA's, EM 385-1-1, NFPA 241, 29 CFR 1910, 29 CFR 1926, and all other Federal, and Great State of California and local regulations. The most stringent standard or regulation shall prevail.

3.1.1.1 Accident Notification and Reports

- 1) For recordable injuries and illnesses, and property damage accidents resulting in at least \$2,000 in damages, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, fill out the Contractor Incident Report (CIR) electronically and submit via the NAVFAC Enterprise Safety Applications Management System (ESAMS) within five (5) calendar days. The Contracting Officer will provide copies of any required or special forms.
- 2) For any weight handling equipment accident (including rigging gear accidents), the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30 calendar days of the accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.
- 3) Notify the Contracting Officer as soon as practical, but not later than four hours, after any accident meeting the definition of Recordable Injuries or Illnesses or High Visibility Accidents, property damage equal to or greater than \$2,000, or any weight handling equipment accident. 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 (e.g., type of construction equipment used, PPE used). Preserve the conditions and evidence on accident site until the Government investigation team arrives and Government investigation is conducted.
- 4) Monthly Work-Hour Reports: Monthly work-hour reporting to the Contracting Officer is required to be attached to the monthly billing request. Additionally, provide the Government's Safety Officer with an electronic copy of the Monthly Work Hour Reports. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor. The Contracting Officer will provide copies of any special forms.

3.1.2 Hazardous Material Use: No hazardous material may be used in or during the performance of work issued on this contract.

3.1.3 Unforeseen Hazardous Material: If material that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer and Contracting Officer's Representative immediately. Within 14 calendar days the Government will make a determination in regards to if the material is hazardous or non-hazardous. If material is non-hazardous or poses no danger, the Contracting Officer will direct the Contractor to proceed without change. If material is found to be hazardous and handling of the

material is necessary to accomplish the work, the Contracting Officer may issue a contract modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions" or may elect to stop work until the hazardous material is removed via a hazardous waste contract vehicle.

3.2 PRE-OUTAGE COORDINATION

3.2.1 Pre-outage Coordination Meeting: Apply for utility outages at least 15-calendar days in advance of the required outage. As a minimum, include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Once approved, and prior to beginning work on the utility system requiring shut down, attend a pre-outage coordination meeting with the Contracting Officer and Contracting Officer's Representative to review the scope of work and the lock-out/tag-out procedures for worker protection. No work will be performed on energized electrical circuits unless proof is provided that no other means exist.

3.3 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

3.3.1 The Contractor shall develop a task order specific Fall Protection and Prevention Plan for the protection of all employees exposed to fall hazards. The Fall Protection Plan shall include the company's fall protection policy, identify the Competent Person for Fall Protection, identify personnel responsibilities, education and training requirements for personnel, identification of fall hazards, fall prevention and control measures, inspection schedules and methods, staging and storage of material and equipment, care and maintenance of fall protection equipment, and rescue and evacuation procedures in accordance with the 29 CFR 1926 Subpart M and ANSI/ASSE Z359.0, ANSI/ASSE Z359.1, ANSI/ASSE Z359.2, ANSI/ASSE Z359.3, AND ANSI/ASSE Z359.4 and ANSI A10.32. Submit the task order specific Fall Protection and Prevention Plan to the Contracting Officer and Contracting Officer's Representative for review and approval. The SSSO shall not allow any work to be performed until the task order specific Fall Protection and Prevention Plan has been approved.

3.3.1.1 Fall Protection for Roofing Work: Implement all 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) A safety monitoring system is not adequate fall protection for low sloped roofs and is not authorized.
- b) Work on steep-sloped roofs, including residential or housing type construction, requires a personal fall arrest system, guardrails with toe-boards, or safety nets.

3.3.1.2 Fall Prevention and Design: During design, consider and eliminate fall hazards encountered at the facility during construction whenever possible. If it is not feasible to eliminate or prevent the need to work at heights with its subsequent exposure to fall hazards, include control measures in the design to protect personnel conducting maintenance work after completion of the project. In addition to the detailed requirements included in the provisions of this contract, incorporate the requirements of 29 CFR 1910 Standards in the design.

3.4 EQUIPMENT

3.4.1 Weight Handling Equipment (WHE) Accident: A WHE accident occurs when any one or more of the six 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, roll over).

For any weight handling equipment accident (including rigging gear accidents), the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report (Crane and Rigging Gear) form and provide the report to the Contracting Officer within 30-calendar days of the accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the contracting officer. The Contracting Officer will provide a blank copy of the accident report form.

3.4.2. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees, unless specifically delineated in the manufacturer's printed operating instructions.

3.4.2.1 The use of hooks on equipment for lifting of material shall be in accordance with manufacturer's printed instructions.

3.4.1.2 Operators of forklifts or power industrial trucks shall be licensed in accordance with 29 CFR 1910.178(l).

3.4.2 Weight Handling Equipment

3.4.2.1 Crane Critical Lift Plan: Prepare and sign weight handling critical lift plans for lifts over 75 percent of the capacity of the crane or hoist (or lifts over 50 percent of the capacity of a barge mounted mobile crane's hoists) at any radius of lift; lifts involving more than one crane or hoist; lifts of personnel; and lifts involving non-routine rigging or operation, sensitive equipment, or unusual safety risks. Submit the plan 15 calendar days prior to on-site work and include the requirements of USACE EM 385-1-1, paragraph 16.C.18. as well as the following:

- a. For lifts of personnel, demonstrate compliance with the requirements of 29 CFR 1926.550(g).
- b. For barge mounted mobile cranes, barge stability calculations identifying barge list and trim based on anticipated loading; and load charts based on calculated list and trim. The amount of list and trim shall be within the crane manufacturer's requirements.

3.4.2.2 Provide a Certificate of Compliance for each crane entering an activity under this contract (see Contracting Officer for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the Contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926 and USACE EM 385-1-1 section 16 and Appendix H. The Certificate of Compliance shall state that the crane operator(s) is qualified and trained in the operation of the crane to be used. Also certify that all of its crane operators working on the DOD activity have been trained in the proper use of all safety devices (e.g., anti-two block devices). Post these certifications on the crane.

3.4.2.3 Notify the Contracting Officer 15-calendar days in advance of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated. Contractor's operator shall remain with the crane during the spot check.

3.4.2.4 Comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Perform erection under the supervision of a designated person (as defined in ASME B30.5). Perform all testing in accordance with the manufacturer's recommended procedures.

3.4.2.5 Comply with ASME B30.5 for mobile and locomotive cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes and floating derricks.

3.4.2.6 Under no circumstance make a lift at or above 90% of the crane's rated capacity in any configuration.

3.4.2.7 When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of USACE EM 385-1-1 section 11 and ASME B30.5 or ASME B30.22 as applicable.

Use cribbing when performing lifts on outriggers.

3.4.2.8 Position the crane hook/block directly over the load. Side loading of the crane is prohibited.

3.4.2.9 Certification records which include the date of inspection, signature of the person performing the inspection, and the serial number or other identifier of the crane that was inspected shall be available for review by Contracting Officer personnel.

3.4.2.10 Written reports listing the load test procedures used along with any repairs or alterations performed on the crane shall be available for review by Contracting Officer personnel.

3.4.2.11 Certify that all crane operators have been trained in proper use of all safety devices (e.g. anti-two block devices).

3.4.2.12 Take steps to ensure that wind speed does not contribute to loss of control of the load during lifting operations. Prior to conducting lifting operations, set a maximum wind speed at which a crane can be safely operated based on the equipment being used, the load being lifted, experience of operators and riggers, and hazards on the work site. Include this maximum wind speed determination in the activity hazard analysis plan for that operation.

3.4.3 Equipment and Mechanized Equipment

3.4.3.1 Only qualified operators may operate equipment and mechanized equipment on any project site. Proof of qualifications for each operator shall be kept on the project site for review by the Contracting Officer's Representative.

3.4.4 Vehicle Mounted Elevating and Work Platforms (Aerial Lift): The Contractor shall comply with the 29 CFR 1910.67 "Powered Platforms, Manlifts, and Vehicle-Mounted Work Platforms",

the 29 CFR 1926.453 Aerial Lifts” and the original equipment manufacturer’s maintenance and operations instructions.

3.4.4.1 The Contractor shall develop a task order specific Vehicle Mounted Elevating and Work Platform Safety Plan. Submit the Vehicle Mounted Elevating and Work Platform Safety Plan to the Contracting Officer and Contracting Officer’s Representative for review and approval. The Contractor or their subcontractor’s personnel shall not mobilize any vehicle mounted elevating and work platform onto any project site until the Safety Plan has been approved. The Safety Plan shall include an Aerial Platform & Scissor Lift Specific Lift Familiarization Training Form, an Operating Manual Acknowledgement Form, an Aerial Platform & Scissor Lift Pre-Start Inspection Form, and an Aerial Platform & Scissor Lift Work Zone Inspection Form. The Contractor shall define in detail the **Do’s and Don’ts** for safe operation of aerial lifts.

3.4.4.2 The SSHO or designated QCM shall ensure that the Site Safety and Health Plan is adhered to and shall:

- a. Ensure that initial training is provided to all aerial lift operators in accordance with the approved Vehicle Mounted Elevating and Work Platform Safety Plan.
- b. Ensure that all operators of the lift review the operator’s manual and sign the acknowledgement form prior to the initial use of the lift
- c. When renting a lift initially, ensure that the rental agency provides specific lift familiarization training for the particular lift that they are renting prior to lift use.
- d. Ensure daily safety inspections of the aerial lift are conducted.
- e. When safety-related concerns have been discovered through safety inspections, ensure that the lift is locked out of service until the item(s) has been corrected.
- f. When lifts are used outdoors, ensure that weather conditions are continuously monitored throughout the use of the lift and that an anemometer (wind velocity meter) is attached to the lift’s personnel platform or a hand held anemometer is used. Aerial platform lifts may not be used when wind speeds reach 21 mph or more; when there is a weather warning in effect for winds in excess of 21 mph; when lightning is observed; or when thunderstorm warnings are in effect.

3.4.4.3 The Operator shall:

- a. Review the operator’s manual prior to the initial lift use. Documentation of this shall be completed using the approved “Operating Manual Acknowledgement Form.”
- b. Know and understand the following about the lift that they operate, prior to the initial operation of the lift:
 1. Safe operation
 2. Hazardous conditions which jeopardize safety
 3. All control features of the lift

4. All placard warnings
 5. All safety devices on the lift
 6. Fall arrest system components and anchor locations
 7. Where to locate the user manual
- c. Perform a pre-operation inspection of the aerial lift prior to each day's (or shift's) use of the lift. Documentation of the pre-operation inspections shall be performed by completing the approved Pre-Operation Inspection Form. Aerial lifts that are not in proper operating condition shall be immediately removed from service and reported to the appropriate departmental manager.
 - d. Prior to setting up the lift at each new location, the operator shall conduct a work zone inspection to identify potential workplace hazards. Weather conditions shall be continuously monitored through a real-time weather source and an anemometer shall be present on all vertical aerial platform lifts through the duration of the use of the lift outdoors. For vehicle-mounted aerial platform lifts, see the operating manual for wind speed guidelines.
 - e. Operators shall notify their supervisor if the lift does not pass inspection or if any unsafe conditions are identified.

3.4.4.4 Reference the original equipment manufacturers operator's manual for the specific criteria required to inspect the aerial lift to be used. Additional inspections shall be conducted after any occurrence that could affect the structural integrity of the equipment.

- a. Prior to using an aerial lift, a pre-use inspection shall be conducted to verify that the equipment and all its components are in safe operating condition. Follow the manufacturer's recommendations for the specific lift but it should include a check of:
 - a. Vehicle Components
 - i. Proper fluid levels (oil, hydraulic, fuel and coolant)
 - ii. Leaks of fluids
 - iii. Wheels and tires
 - iv. Battery and charger
 - v. Lower-level controls
 - vi. Horn, gauges, lights and backup alarms
 - vii. Steering and brakes
 - b. Lift Components
 - i. Operating and emergency controls
 - ii. Personal protective devices
 - iii. Hydraulic, air, pneumatic, fuel and electrical systems
 - iv. Fiberglass and other insulating components
 - v. Missing or unreadable placards, warnings, or operational, instructional and control markings
 - vi. Mechanical fasteners and locking pins

- vii. Cable and wiring harnesses
 - viii. Outriggers and stabilizers
 - ix. Loose or missing parts
 - x. Guardrail system
1. Before an aerial platform lift is used, the operator shall visually check the work zone area where the lift is to be used, identifying potential hazards such as, but not limited to:
 - i. Drop-offs, holes, unstable surfaces
 - ii. Slopes, ditches or bumps
 - iii. Debris and floor obstructions
 - iv. Overhead obstructions and power lines
 - v. Hazardous locations and atmospheres
 - vi. Inadequate surface and support to withstand all load forces imposed by the lift
 - vii. Wind and weather conditions
 - viii. Presence of others in close proximity to the work

3.4.4.5 In addition to any other markings or decals that are placed on the lift by the manufacturer, the following information shall be displayed on all aerial platform lifts in a clearly visible, accessible area and in a durable manner:

- a. The make, model, serial number, and manufacturer's name and address
- b. The rated workload, including rated number of occupants
- c. The maximum platform height

3.5 ELECTRICAL

3.5.1 The SSHO shall address working with energized and de-energized electrical work in the task order specific APP. Circuits, conduit and conductors that will be cut shall be positively identified and de-energized prior to performing each cut. Positive cable identification shall be made prior to submitting any outage request for electrical systems. As applicable, submit an outage request within 21-calendar days prior to the requested outage date. The Contracting Officer's Representative will not accept an outage request from the Contractor until the Contractor satisfactorily documents that the circuits and electrical power sources have been clearly identified. Plan so that work near energized parts is minimized to the fullest extent possible. All personnel working on electrical circuits and equipment shall receive training that has been addressed in the task order APP and AHA prior to beginning work. The training shall be documented, to include the names of the personnel receiving the training and who will be performing the work. Submit the documentation as part that days Contractor's Daily Production Report.

3.6 WORK IN CONFINED SPACES

3.6.1 Work in Confined Spaces: In addition to the requirements of Section 06.I of USACE EM 385-1-1, OSHA 29 CFR 1910.146 and OSHA 29 CFR 1926.21(b)(6), comply with the following paragraphs. Any potential for a hazard in the confined space requires a permit system to be used.

1. Confined Space Signage: Provide permanent signs integral to or securely attached to access covers for permit-required confined spaces provided by this contract. Signs wording: "DANGER--PERMIT-REQUIRED CONFINED SPACE - DO NOT ENTER -" in bold letters a minimum of 25 mm (one inch) in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m (5 feet).
2. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and all potential hazards are controlled or eliminated and documented. (See Section 06.I.06 of USACE EM 385-1-1 for entry procedures.) Review all hazards pertaining to the space with each employee during AHA process.
3. Forced air ventilation is required for all confined space entry operations. Maintain minimum air exchange requirements to ensure exposure to any hazardous atmosphere is kept below its' action level.
4. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.

3.7 TRAFFIC CONTROL PLAN

3.7.1 The Contractor shall develop a task order site specific Traffic Control Plan using the California Manual for Uniformed Traffic Devices (CAMUTCD) as a guideline whenever construction operations will impeded traffic flow. Traffic Control Plans shall be developed by a State of California licensed Traffic Control Engineering firm. The Traffic Control Plan shall be submitted as an AutoCAD hard copy drawing. Submit three copies of site specific Traffic Plan to the Contracting Officer and Contracting Officer's Representative (COR) for review and approval. The Contractor is informed that the Traffic Control Plan will be forwarded to the Base Provost Marshall's Office for review. The Contractor shall make all necessary changes to the submitted Traffic Control Plan per the Provost Marshall's Office's recommendations. Once the Traffic Control Plan is approved by the Base Provost Marshall's Office the Contracting Officer and Contracting Officer's Representative will have final approval. The Contractor shall not mobilize on construction site until the plan has been approved.

3.7.1.1 Conduct construction operations to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

3.7.1.2 Traffic Control Signs: Where pedestrian and driver safety is endangered in the area of work, use traffic barricades with flashing lights. Signs shall be adequate from the regulation safety and convenience of traffic and pedestrians. The Contractor may be required to employ traffic flagmen and take other such reasonable means or precautions to prevent damage or injury other property, and to minimize to the public by their demolition operations.

3.7.1.3 Do not close or obstruct streets, walks, or other occupied or used facilities without prior permission from the Base Provost Marshall Office. Provide alternate routes around closed or obstructed traffic ways, if required by governing regulations.

3.7.1.4 The Contractor shall maintain traffic control in the project area to the satisfaction of the Contracting Officer, Contracting Officer's Representative and Base Provost Marshall's Office. The

Contractor shall maintain pedestrian and vehicular traffic. It shall be the sole responsibility of the Contractor to keep the Base Provost Marshall's Office and the Base Fire Department's Office notified at least 72-hours in advance of changes in the approved Traffic Control Plan. Or when there are obvious changes in the traffic patterns. The Contractor shall supply, install, maintain, adjust, move, relocate and store all signs, suitably lighted barricades, traffic cones, warning lights and traffic delineators, trailer mounted message and arrow boards, lighting, pilot cars, as necessary to carry out the traffic routing plan and maintain vehicular and pedestrian traffic, to keep people, animals, and vehicles from excavations, obstacles, etc.

3.8 HAZARD ENERGY CONTROL PLAN

3.8.1 The Contractor shall develop a task order specific Hazardous Energy Control Plan. The plan shall explain how hazardous energy, through lockout/tagout procedures, will be controlled within a work environment. The plan shall address:

- 1) intended operations and procedures;
- 2) means to coordinate and communicate the control of hazardous energy;
- 3) procedural steps and responsibilities for shutting down, isolating, blocking, and securing systems to control hazardous energy;
- 4) steps and responsibilities for the placement, removal, and transfer of lockout and tagged out devices;
- 5) steps and responsibilities for placing and tagging, and moving or removing and un-tagging, protective grounds;
- 6) requirements for testing the system to verify the effectiveness of lockout and tag-out isolation devices;
- 7) courses of actions to implement during emergencies;
- 8) requirements when removing hazardous energy control devices shall be transferred from one authorized person to another, and the name of the individuals qualified for receiving such a transfer; and
- 9) the means to enforce compliance with the procedures.

3.9 HAZARDS TO AIRFIELD OPERATION

3.9.1 In addition to "DFARS 252.236-7005, Airfield Safety Precautions," the following paragraphs apply:

3.9.1.1 Work in Proximity to Runways. Accomplish all construction work on the runways, taxiways, and parking aprons and in the end zones of the runways and 23 m (75 feet) to each side of the runways and taxiways to each side thereof with extreme care regarding the operation of aircraft. Cooperate closely, and coordinate with the Operations Officer and the Contracting Officer. Park equipment in an area designated by the Contracting Officer. Under no circumstances shall equipment be parked overnight or for any extended period of time in the proximity of the runways or taxiways. Leave no material in areas where extreme care is to be taken regarding the operation of aircraft. FOD (Foreign Objects and Debris) Fencing will be required at the exterior construction boundary limit(s).

3.9.1.2 Schedule of Work/Aircraft Operating Schedules. Schedule work to conform to aircraft operating schedules. The Government will exert every effort to schedule aircraft operations so as to permit the maximum amount of time for the Contractor's activities; however, in the event of emergency, intense operational demands, adverse wind conditions, and other such unforeseen

difficulties, the Contractor shall discontinue operations at the specified locations in the aircraft operational area for the safety of the Contractor and military personnel and Government property. Submit a schedule of the work to the Contracting Officer for coordination/transmittal to the Flight Line Operations Officer describing the work to be accomplished; the location of the work, noting distances from the ends of runways, taxiways, parking ramps, flight operations areas and buildings and other structures as necessary; and dates and hours during which the work is to be accomplished. Keep the approved schedule of work current, and notify the Contracting Officer of any changes prior to beginning each day's work. The Contractor shall conform to 49 CFR Part 77, more specifically § 77.7 and § 77.9. Notification shall be submitted on Federal Aviation Administration (FAA) Form 7460-1.

3.9.1.3 Daytime Markings. During daylight, mark stationary and mobile equipment with international orange and white checkered flags, mark the material, and work with yellow flags.

3.9.1.4 Nighttime Markings. During nighttime, which begins two (2) hours before sundown and ends two (2) hours after sunrise, mark stationary and mobile equipment and material, and work with red lanterns. Where the Operations Officer determines that the red lanterns may confuse pilots approaching for landings, the Operations Officer may direct that the red lanterns be left off or that the color of the globes be changed.

3.9.1.5 Excavation. Open only those trenches for which material is on hand and ready for placing therein. As soon as possible after the material has been placed and work approved, backfill and compact the trenches as specified.

3.9.1.6 Contractor Safety Precautions. The contractor is advised that aircraft operations will produce extremely high noise levels and will induce vibrations in pavements, structures, and equipment in the vicinity, and may result in high velocity flying debris in the area. For any contract work within the Flight Line security fenced area and directly adjacent to aircraft ramp (parking) areas, extreme caution is to be exercised at all times. The Contractor shall be responsible for providing all necessary ear protective and other safety devices for his personnel, for insuring protection of his equipment, and for scheduling the work to eliminate hazards to his personnel and equipment and to prevent damage to work performed by him.

3.9.1.7 Foreign Objects and Debris (FOD) Fencing. FOD Fencing will be required at the exterior construction boundary limit(s).

3.9.1.8 Crane Operations. All crane operations, including crane maximum dimension data, must be submitted to the Contracting Officer for coordination/transmittal to the Flight Line Operations Officer a minimum of 10-working days before each operation. Cranes must be marked and lighted in accordance with all applicable regulations for crane work in and/or around airfields.

3.9.1.9 Radio Contact. During work within the landing area, have an operator (who speaks fluent English) available for radio contact with the tower at all times. Radio(s) are available from Flight Line Operations, via the Contracting Officer.

3.1.9.10 The Contractor shall coordinate training for personnel required to perform work and management. Once the training has been completed the Contractor's personnel and management will be allowed access.

3.10 UTILITY LOCATIONS AND VERIFICATION PRIOR TO EXCAVATION

3.10.1 Obtain appropriate digging permit from the respective Activity's Locating and Utilities Outage Office through Contracting Officer's Representative prior to digging. All underground utilities in the work area must be positively identified by a private third party utility locating service in addition to any station locating service and coordinated with the respective Activity's utility departments. Maintain all markings during utility investigation throughout the contract.

Physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system. Use hand digging within 0.61 m (2 feet) of a known utility. If construction is parallel to an existing utility, expose the utility by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.10.2 Utilities Within Concrete Slabs: Utilities located within concrete slabs are extremely difficult to identify due to the reinforcing steel used in the construction of these structures. Whenever work involves concrete chipping, saw cutting, or core drilling, the existing utility location must be coordinated with the respective Activity's utility departments in addition to a private locating service. Outages to isolate utility systems shall 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.

3.11 Ergonomics Considerations In Design:

3.11.1 Design facilities, processes, job tasks, tools and materials to reduce or eliminate work-related musculoskeletal (WMSD) injuries and risk factors in the workplace. Design maintenance access to reduce WMSD risk factors to the lowest level possible. In addition to requirements included in this contract, design shall incorporate the requirements of MIL-STD-1472F.

3.1.12 USE OF EXPLOSIVES

3.12.1 Use of explosives is not permitted.

3.1.13 EXCAVATIONS

3.13.1 Soil classifications must be performed by a competent person in accordance with 29 CFR 1926.

3.8.2 Utility Locations

3.13.2.1 Locating: Prior to digging, the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a private utility locating service in addition to any station locating service and coordinated with the station utility department. Any markings made during the utility investigation must be maintained by the Contractor throughout the period of construction on a task order or project.

3.13.2.2 Utility Location Verification: The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass handled tools when any adjacent construction work is expected to come within three feet of the underground system.

Digging within 610 mm [2 feet] of a known utility must not be performed by means of mechanical equipment; hand digging shall be used. If construction is parallel to an existing utility expose the utility by hand digging every 30.5 m (100 feet) if parallel within 1.5 m (5 feet) of the excavation.

3.13.3 Shoring Systems: Trench and shoring systems must be identified in the accepted safety plan and AHA. Manufacture tabulated data and specifications or registered engineer tabulated data for shoring or benching systems shall be readily available on-site for review. Job-made shoring or shielding must have the registered professional engineer stamp, specifications, and tabulated data. Extreme care must be used when excavating near direct burial electric underground cables.

3.13.4 Trenching Machinery: Operate trenching machines with digging chain drives only when the spotters/laborers are in plain view of the operator. Provide operator and spotters/laborers training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Keep documentation of the training on file at the project site.

3.14 STEEL PLATE BRIDGING

3.14.1 Consideration of steel plate bridging should take into account the following factors:

- a) Traffic volume and composition.
- b) Duration and size of the proposed excavation.
- c) Weather conditions.

3.14.2 When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a non-skid surface and shoring (see Trenching & Shoring) may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plate bridging on freeways is not allowed.
2. Steel plates used for bridging must extend a minimum of 12" (305 mm) beyond the edges of the trench.
3. Steel plate bridging shall be installed to operate with minimum noise.
4. The trench shall be adequately shored, as mentioned in Section 516.10, to support the bridging and traffic loads.
5. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.

6. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

3.14.3 Steel plate bridging and shoring shall be installed using Method (2).

3.14.3.1 Method 2 [For Speeds less than 45 mph (70 Km/hr)]:

1. Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" (50 mm) into the pavement. Subsequent plates are butted to each other. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5 % with a minimum 12" (305 mm) taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt concrete mix or concrete slurry.

3.14.4 The Contractor is responsible for maintenance of the steel plates, shoring, asphalt concrete ramps, and ensuring that they meet minimum specifications. Steel plate bridging should not exceed 4 consecutive working days in any given week unless permitted by the Contracting Officer. Backfilling of excavations shall be covered with a minimum 3" (75 mm) temporary layer of cold asphalt concrete.

3.14.5 All steel plates within the right of way whether used in or out of the traveled way shall be without deformation. The Quality Control Manager should determine the trueness of steel plates by using a straight edge and should reject any plate that is permanently deformed.

3.14.6 Steel plates used in the traveled portion of the roadways shall have a surface that was manufactured with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342. The Quality Control Manager shall have steel bridging plates removed from the site that do not meet the California Test Method 342.

3.14.7 A Rough Road sign (W33) with black lettering on an orange background may be used in advance of steel plate bridging. This sign is used along with any other required construction signing.

3.14.8 Surfacing requirements are not necessary for steel plates used in parking strips, on shoulders not used for turning movements, or on connecting driveways, etc., not open to the public.

-- End of Section --

SECTION 01 35 40.00 20

ENVIRONMENTAL MANAGEMENT

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z400.1 (2004) Hazardous Industrial Chemicals - Material Safety Data Sheets - Preparation

ASTM INTERNATIONAL (ASTM)

ASTM D 4840 (1999; R 2004) Sampling Chain-Of-Custody Procedures

ASTM D 5663 (1997; R 2003) Validating Recycled Content in Packaging Paper and Paperboard

ASTM E 1991 (2005) Environmental Life Cycle Assessment of Building Materials/Products

ASTM E 2114 (2008) Standard Terminology for Sustainability Relative to the Performance of Buildings

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO 14040 (2006) Environmental Management - Life Cycle Assessment - Principles and Framework

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

NIST BEES 4.0 (2007) Building for Environmental and Economic Sustainability Technical Manual and User's Guide

U.S. DEPARTMENT OF AGRICULTURE (USDA)

Biomass R&D Act (2000) Biomass Research and Development Act

U.S. Farm Bill (2002) U.S. Farm Bill of May 2002

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

NPDES (1972; R 2005) National Pollutant Discharge Elimination System

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

40 CFR

Protection of Environment

40 CFR 261

Identification and Listing of Hazardous Waste

1.2 DEFINITIONS

1.2.1 Definitions pertaining to sustainable development are defined in ASTM E 2114, Standard Terminology for Sustainability Relative to the Performance of Buildings and as below:

1.2.1.1 Pollution and environmental damage" is caused by the presence of chemical, physical, or biological elements or agents. Human health or welfare is adversely affected; ecological balances are unfavorably altered, and the utility of the environment for aesthetic, cultural, or historical purposes degrades.

1.3 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Environmental Protection Plan, contract specific; GA, KO, PO
- Laydown/Staging Area task order specific site drawing; GA, KO, PO
- Best Management Practices (BMP) for Storm Water Pollution Prevention; GA, KO, PO

1.4 CONTRACTOR'S ENVIRONMENTAL MANAGER

1.4.1 Designate an Environmental Manager responsible for overseeing the environmental goals for the contract and implementing procedures for environmental protection. The QCM may act as the Environmental Manager.

1.4.1.1 The Environmental Manager shall be responsible for the following duties:

- a. Ensuring compliance with all applicable Federal, Great State of California, the respective Activity, San Diego County, and local environmental regulations, including maintaining required documentation.
- b. Implementation and management of the Waste Management Plan.
- c. Implementation and management Recycle Plan.

- d. Environmental training for Contractor and subcontractor personnel in accordance with their position requirements.
- e. Monitoring and documentation of environmental procedures on project sites, storage and staging areas and if applicable, the assigned lot located in the 26 Area Laydown Lot.

1.4.2 Qualifications: Minimum three years construction experience on contracts of similar size and scope, familiarity with Environmental Management Systems (EMSs), and familiarity with environmental regulations applicable to construction operations as specified in this contract.

1.5 ENVIRONMENTAL REGULATORY REQUIREMENTS

1.5.1 The Contractor's Environmental Manager shall be responsible for knowing Federal, Great State of California, San Diego County, the respective Activity, and other local agency's regulatory requirements pertaining to legal disposal of all construction and demolition waste materials. Comply with all applicable regulations and maintain records of permits, licenses, certificates, and other environmental regulatory requirement correspondences.

1.5.2 Regulatory Compliance

1.5.2.1 RCRA hazardous and non-hazardous solid waste requirements:

- a. Refer to EPA's Office of Solid Waste and Emergency Response:
<http://www.epa.gov/epaoswer/osw/laws-reg.htm>

1.5.2.2 Oil spill requirements for construction activities:

- a. Refer to EPA Oil Program web site: <http://www.epa.gov/oilspill/>

1.5.2.3 Hazardous substances (Superfund Liability) requirements for construction activities:

- a. Refer to EPA's Superfund website: <http://www.epa.gov/superfund/index.htm>

1.5.2.4 Polychlorinated Biphenyl (PCB) waste requirements:

- a. Refer to EPA's Polychlorinated Biphenyl (PCB): <http://www.epa.gov/pcb/>

1.5.2.5 Air quality requirements for construction activities:

- a. Refer to EPA'S Air Program Mobile Sources Page:
<http://www.epa.gov/ebtpages/airmobilesources.html>

1.5.2.6 Asbestos requirements for construction activities:

- a. Refer to EPA's Asbestos Management and Regulatory: Requirements Website:
<http://www.epa.gov/fedsite/cd/asbestos.html>

1.5.2.7 National Environmental Policy Act (NEPA) requirements for construction activities.

1.5.2.8 Endangered Species Act:

- a. Refer to The US Fish and Wildlife Service Endangered: Species Program:
<http://endangered.fws.gov/>

1.5.2.9 National Historic Preservation Act

1.5.2.10 State Office/Department of Environmental Quality

1.5.2.11 Local Office/Department of Environmental Quality

1.5.2.12 The Construction Industry Compliance Assistance Center; an EPA-sponsored tool providing information on state and federal requirements: <http://www.cicacenter.org/index.cfm>

1.5.2.13 The National Environmental Compliance

- a. Assistance Clearinghouse: <http://cfpub.epa.gov/clearinghouse/>

1.5.2.14 The Associated General Contractors of America (AGC); provides tools to assist with compliance: <http://www.agc.org/>

1.5.3 The Contractor shall be responsible for knowing all Federal, Great State of California, other states as applicable, and local regulatory requirements pertaining to legal disposal of all construction and demolition waste materials. Comply with all applicable regulations and maintain records of permits, licenses, certificates, and other environmental regulatory requirement correspondences.

1.6 ENVIRONMENTAL REQUIREMENTS FOR PRODUCTS

1.6.1 Material Safety Data Sheets (MSDS): Submit a MSDS for each product that will be used in the performance work on this contract. The MSDS shall have been prepared no earlier than June 1998. Include information for MSDS in accordance with ANSI Z400.1 and as follows:

- a. Include data used to determine the hazards cited in Section 3. Identify acute data, carcinogenicity, reproductive effects, and target organ effects.
- b. Include data regarding environmental impacts during raw materials acquisition, manufacture, and use. Include data regarding environmental impacts in the event of an accidental release.
- c. Include data regarding the proper disposal of the chemical. Include information regarding recycling and reuse. Indicate whether or not the product is considered to be "hazardous waste" according to 40 CFR 261.
- d. Identify hazard class for shipping.
- e. Identify Federal, Great State of California, and local regulations applicable to the material.
- f. Include additional information relative to recycled content, biobased content, and other information regarding environmental and health impacts.

1.7 ENVIRONMENTAL PROTECTION PLAN

1.7.1 Prepare and submit an Environmental Protection Plan within 15-calendar days after award of this contract. At a minimum, address the following elements in accordance with this section:

- a. Identification and resume of the Environmental Manager.
- b. Contact information for the Environmental Manager
- c. Procedures to manage the protection of the environment when mobilizing and during construction operations.
- d. Summary of training program.
- e. Monitoring and quality control procedures for construction operations when mobilizing and during construction operations.

1.8 ENVIRONMENTAL TRAINING

1.8.1 The Environmental Manager shall complete a minimum of 24 credit hours of environmental specialist training per year. The training shall encompass environmental compliance and ensure public safety in the work place. The training shall provide essential knowledge and understanding of EPA regulations relating to hazardous wastes such as the Clean Air Act (CAA), Clean Water Act (CWA), RCRA, EPCRA, TSCA and CERCLA. The Environmental manager shall complete the training and receive certification within three months after award of this contract.

1.8.2 The Environmental Manager shall ensure that environmental training is provided to each tradesperson and on-site management personnel prior to start of work on each task order project.

1.8.3 Develop a training program for all site workers that includes the following topics:

- a. Overview of environmental and sustainability issues related to the project.
- b. Compliance with applicable Federal, Great State of California, San Diego County, and the respective Activity's environmental regulations.
- c. Review of site specific procedures and management plans implemented for each task order construction project, including the Waste Management Plan, Indoor Air Quality (IAQ) Management Plan, Environmental Protection Plan, and procedures for noise and acoustics management.

1.8.4 Evaluation: At the conclusion of each training session, assess and document each participant's understanding of the environmental training information by conducting an oral question and answer test. Submit supporting documentation, to include a roster of personnel that attended and the date of attendance. The documentation shall be submitted the following day of work as part of the Contractor's Daily Production Report.

PART 2 PRODUCTS

2.1 ENVIRONMENTALLY PREFERABLE PRODUCTS

2.1.1 Consider raw materials, production, manufacturing, packaging, distribution, reuse, operation, maintenance, and disposal of products and provide products and materials with the least impact on the environment.

2.2 PROHIBITED MATERIALS

2.2.1 The use of the following materials is prohibited:

- a. Products containing asbestos.
- b. Products containing urea formaldehyde.
- c. Products containing polychlorinated biphenyls
- d. Products containing chlorinated fluorocarbons.
- e. Solder or flux containing more than 0.2 percent lead and domestic water pipe or pipe fittings containing more than 8 percent lead.
- f. Paint containing more than 0.06 percent lead.

2.3 PACKAGING

2.3.1 Where Contractor has the option to provide one of the listed products or equal, preference shall be given to products with minimal packaging and easily recyclable packaging, and to manufacturers with policies that take back product packaging.

2.3.2 Industrial Paperboard: Minimum 45-percent post-consumer recycled content in accordance with ASTM D 5663.

2.3.3 Carrier Board: Minimum 10-percent recycled content with a minimum of 10-percent post-consumer recycled content in accordance with ASTM D 5663.

2.3.4 Brown Papers: Minimum 5-percent recycled content with a minimum of 5-percent post-consumer recycled content in accordance with ASTM D 5663.

2.5 Substitutions: Notify the Contracting Officer when aware of materials, equipment, or products that meet the aesthetic and programmatic intent of contract specifications, but which are more environmentally responsible than materials, equipment, or products specified or indicated in the contract technical section. Submit the following for initial review by the Contracting Officer:

- a. Product data including manufacturer's name, address, and phone number.
- b. Description of environmental advantages of proposed substitution over specified product.

PART 3 EXECUTION

3.1 PROTECTION OF NATURAL RESOURCES

3.1.1 All work shall be in accordance with the issued Category Exclusion (CATX) or Decision Memorandum (DM) for each task order. Comply with all applicable regulations and contract specifications. Preserve the natural resources within the boundaries of the Activities and directly outside the boundaries of the Activities in the performance of work under this contract. Restore the impacted environmental areas to their existing condition or restore to an equivalent or improved condition as approved by the Contracting Officer. Document all impacts to the environment during construction of the Contractor's Daily Production Report.

3.1.1.1 The Contractor shall establish a laydown/staging area in accordance with the CATX and DM. The Contractor shall submit a site drawing to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order for review and approval. The site drawing shall indicate where the laydown/staging area will be located. The laydown/staging area is inclusive of all materials and equipment, to include site equipment and vehicles required to perform site work.

3.1.2 General Disturbance: Confine demolition and construction activities to the work area limits indicated on the issued CATX or DM. Remove debris, rubbish, and other waste materials resulting from demolition and construction operations from site. Transport materials with appropriate vehicles and dispose of them at an approved landfill or recycle center located off of the Activity. Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways. Remove spillage and sweep, wash, or otherwise clean project site, streets, or highways. Burning is prohibited.

3.1.3 Water Resources: Comply with requirements of the NPDES and the applicable State of California Pollutant Discharge Elimination System (SPDES). Prevent oily or other hazardous substances from entering the ground, drainage areas, or local bodies of water. Store and service construction equipment at areas designated for collection of oil wastes. Prevent ponding of stagnant water conducive to mosquito breeding habitat. Prevent run-off from site during demolition and construction operations. Equipment will not be permitted to ford live streams.

3.1.4 Land Resources: Prior to construction, identify land resources to be preserved within the work area. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and landforms without permission from the Contracting Officer.

3.1.3.1 Erodible Soils: Plan and conduct earthwork to minimize the duration of exposure of unprotected soils. Clear areas in reasonably sized increments only as needed to use the areas developed. Form earthwork to final grade to the existing grade elevation. Protect side slopes and back slopes upon completion of rough grading.

3.1.3.2 Erosion and Sedimentation Control Devices: Install temporary and permanent erosion and sedimentation control features as part of the approved Best management Practices.

3.1.3.3 Tree and Plant Protection: Prior to start of construction, tag each tree and plant scheduled to remain. In the event of damage to tree or plant, the Government may, at the Contracting Officer's discretion, deduct the indicated value of the damaged tree or plant from the Contract Sum.

3.1.4 Air Resources: The Indoor Air Quality (IAQ) Management Plan shall be included as part of the Environmental Protection Plan. The Indoor Air Quality (IAQ) Management Plan comply with the following:

- a. Prevent creation of dust, air pollution, and odors.
- b. Sequence construction to avoid unnecessary disturbance to site.
- c. Use mulch, water sprinkling, temporary enclosures, and other appropriate methods as needed to limit dust and dirt rising and scattering in air. Do not use water when it may create hazardous or other adverse conditions such as flooding and pollution.
- d. Store volatile liquids, including fuels and solvents, in closed containers. Do not store with materials that have a high capacity to adsorb VOC emissions or in occupied spaces.
- e. Properly maintain equipment to reduce gaseous pollutant emissions.

3.1.5 Fish and Wildlife Resources: Manage and control construction activities to minimize interference with and damage to fish and wildlife. Do not disturb fish and wildlife. Do not alter water flows or otherwise significantly disturb the native habitat related to the project and critical to the survival of fish and wildlife.

-- End of Section --

SECTION 01 42 00

SOURCES FOR REFERENCE PUBLICATIONS

05/09

PART 1 GENERAL

1.1 REFERENCES

1.1.1 Various publications are referenced in other sections of the specifications to establish requirements for the work. These references are identified in each section by document number, date and title. The document number used in the citation is the number assigned by the standards producing organization, (e.g. ASTM B 564 Nickel Alloy Forgings). However, when the standards producing organization has not assigned a number to a document, an identifying number has been assigned for reference purposes.

1.2 ORDERING INFORMATION

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

ACOUSTICAL SOCIETY OF AMERICA (ASA)

2 Huntington Quadrangle, Suite 1N01
Melville, NY 11747-4502

Ph: 516-576-2360

Fax: 516-576-2377

E-mail: asa@aip.org

Internet: <http://asa.aip.org>

ACI INTERNATIONAL (ACI)

38800 Country Club Drive
Farmington Hills, MI 48331

Ph: 248-848-3700

Fax: 248-848-3701

E-mail: bkstore@concrete.org

Internet: <http://www.concrete.org>

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)

2111 Wilson Blvd., Suite 500
Arlington, VA 22201

Ph: 703-524-8800

Fax: 703-528-3816

E-mail: ahri@ahrinet.org

Internet: <http://www.ahrinet.org>

AIR CONDITIONING CONTRACTORS OF AMERICA (ACCA)

2800 Shirlington Road, Suite 300

Arlington, VA 22206
Ph: 703-575-4477
Fax: 703-575-4449
E-mail: info@acca.org
Internet: <http://www.acca.org>

AIR DIFFUSION COUNCIL (ADC)
104 So. Michigan Ave., No. 1500
Chicago, IL 60603
Ph: 312-201-0101
Fax: 312-201-0214

AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL (AMCA)
30 West University Drive
Arlington Heights, IL 60004-1893
Ph: 847-394-0150
Fax: 847-253-0088
E-mail: amca@amca.org
Internet: <http://www.amca.org>

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS (ATIS)
1200 G Street, NW, Suite 500
Washington, D.C. 20005
Ph: 202-628-6380
Fax: 202-393-5453
Internet: <http://www.atis.org>

ALUMINUM ASSOCIATION (AA)
National Headquarters
1525 Wilson Boulevard, Suite 600
Arlington, VA 22209
Ph: 703-358-2960
Fax: 703-358-2961
Internet: <http://www.aluminum.org>

AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA)
1827 Walden Office Square
Suite 550
Schaumburg, IL 60173-4268
Ph: 847-303-5664
Fax: 847-303-5774
E-mail: webmaster@aamanet.org
Internet: <http://www.aamanet.org>

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

Internet: <http://www.aashto.org>

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

1 Davis Drive

P.O. Box 12215

Research Triangle Park, NC 27709-2215

Ph: 919-549-8141

Fax: 919-549-8933

E-mail: quantem@aatcc.org

Technical Questions: hammona@aatc.org

Internet: <http://www.aatcc.org>

AMERICAN BEARING MANUFACTURERS ASSOCIATION (ABMA)

2025 M Street, NW, Suite 800

Washington, DC 20036

Ph: 202-367-1155

Fax: 202-367-2155

E-mail: info.abma@smithbucklin.com

Internet: <http://www.abma-dc.org>

AMERICAN BOILER MANUFACTURERS ASSOCIATION (ABMA)

8221 Old Courthouse Road Suite 207

Vienna, VA 22182

Ph: 703-356-7172

Fax: 703-356-4543

Internet: <http://www.abma.com>

AMERICAN BUREAU OF SHIPPING (ABS)

Internet: <http://www.eagle.org>

AMERICAN CONCRETE PIPE ASSOCIATION (ACPA)

222 West Las Colinas Boulevard, Suite 641

Irving, TX 75039-5423

Ph: 972-506-7216

Fax: 972-506-7682

E-mail: info@concrete-pipe.org

Internet: <http://www.concrete-pipe.org>

AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
(ACGIH)

1330 Kemper Meadow Drive

Cincinnati, OH 45240

Ph: 513-742-2020

Fax: 513-742-3355

E-mail: mail@acgih.org

Internet: <http://www.acgih.org>

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)

American Wood Council

ATTN: Publications Department

1111 Nineteenth Street NW, Suite 800

Washington, DC 20036
Ph: 800-890-7732 or 202-463-2766
Fax: 202-463-2791
Internet: <http://www.awc.org/>

AMERICAN GAS ASSOCIATION (AGA)
400 North Capitol Street N.W.
Suite 450
Washington, D.C. 20001
Ph: 202-824-7000
Fax: 202-824-7115
E-mail: webmaster@aga.org
Internet: <http://www.aga.org>

AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA)
500 Montgomery Street, Suite 350
Alexandria, VA 22314-1560
Ph: 703-684-0211
Fax: 703-684-0242
E-mail: webmaster@agma.org
Internet: <http://www.agma.org>

AMERICAN HARDBOARD ASSOCIATION (AHA)
c/o Composite Panel Association
18922 Premiere Court
Gaithersburg, MD 20879-1574
Ph: 301-670-0604
Fax: 301-840-1252
Internet: <http://www.pbmdf.org>

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)
2700 Prosperity Ave., Suite 250
Fairfax, VA 22031
Tel: 703-849-8888
Fax: 703-207-3561
E-mail: infonet@aiha.org
Internet <http://www.aiha.org>

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
One East Wacker Drive
Chicago, IL 60601-1802
Ph: 312-670-2400
Fax: 312-670-5403
Publications: 800-644-2400
E-mail: pubs@aisc.org
Internet: <http://www.aisc.org>

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
7012 South Revere Parkway, Suite 140
Englewood, CO 80112
Ph: 303-792-9559

Fax: 303-792-0669
E-mail: info@aitc-glulam.org
Internet: <http://www.aitc-glulam.org>

AMERICAN IRON AND STEEL INSTITUTE (AISI)
1140 Connecticut Avenue, NW, Suite 705
Washington, DC 20036
Ph: 202-452-7100
Fax: 202-463-6573
Internet: <http://www.steel.org>

AMERICAN LADDER INSTITUTE (ALI/LADDER)
410 North Michigan Avenue
Chicago, IL 60611
Tel: 312-644-6610
Fax: 312-527-6705
E-mail: rpietrzak@smithbucklin.com
Internet: <http://www.americanladderinstitute.org>

AMERICAN LUMBER STANDARDS COMMITTEE (ALSC)
P.O. Box 210
Germantown, MD 20875-0210
Ph: 301-972-1700
Fax: 301-540-8004
E-mail: alsc@alsc.org
Internet: <http://www.alsc.org>

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
1819 L Street, NW, 6th Floor
Washington, DC 20036
Ph: 202-293-8020
Fax: 202-293-9287
E-mail: info@ansi.org
Internet: <http://www.ansi.org/>

AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA)
1000 Vermont Avenue, NW, Suite 300
Washington, DC 20005-4914
Ph: 202-789-2900
Fax: 202-789-1893
Internet: <http://www.anla.org>

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Department of Defense Single Stock Point (DODSSP)
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Internet: <http://assist.daps.dla.mil/online/start/>; account registration required

Obtain Unified Facilities Criteria (UFC) from:
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National Institute of Building Sciences (NIBS)

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Fax: 202-289-1092
Internet: http://www.wbdg.org/references/docs_refs.php

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Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION 01 45 00.10 20

**QUALITY CONTROL FOR MINOR CONSTRUCTION
02/10**

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1

(2008) Safety and Health
Requirements Manual

1.2 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Construction Quality Control Plan: Submit a Construction Quality Control Plan that addresses the administration, management, and quality control procedures and measurements as they apply to this contract; GA, KO, PO
- Qualifications of the Construction Quality Control Manager (QCM). Submit a resume of the assigned QCM(s) qualifications and experience for contracts of similar size and scope over the past 3-years.; GA, KO, PO
- Appointment Letter and safety training certifications if the Quality Control Manager (QCM) is assigned the collateral responsibility of enforcing safety. Submit a resume of the; GA, KO, PO
- Contractor Quality Control Report: Submit as part of the Contractor Daily Production Report by 8:00 AM of the following day for each definable feature of work, for each awarded task order; GA, KO, PO

1.3 INFORMATION FROM THE CONTRACTING OFFICER

1.3.1 Prior to commencing work on this contract, the Contractor will be provided with a hard copy or an electronic copy of the Contractor Daily Production Report. The report consists of the Contractor Daily Production Report, Contractor Production Report (Continuation Sheet), Contractor Quality Control (CQC) Report, CQC Report (Continuation Sheet), Preparatory Phase Checklist, Initial Phase Checklist, Rework Items List, and Testing Plan and Log.

1.3.2 The QCM shall submit a completed Contractor's Daily Production Report by 8:00 AM specific to the previous day of work and specific to each task order. The Contractor's Daily Production Report may be submitted electronically.

1.4 QC PLAN REQUIREMENTS

1.4.1 The Contractor shall develop and submit a QC Plan to the Contracting Officer and Contracting Officer's Representative for review and approval within 15-calendar days after award of this contract. The QC Plan shall identify the QC organization, who the Quality Control Manager (QCM) is, the QCM's resume of experience, the process of submittal review and approval, how the Contractor will manage and administrate quality control on task order construction projects, how the three phases of control will be performed, how testing, certification and reports will be performed and recorded, how material and equipment will be inspected and certified when delivered to the task order project site, how work in progress will be inspected, and how deficient work, materials, and equipment will be identified, recorded and corrected. The QC Plan shall cover on-site and off-site work and shall be keyed to the work sequence.

No work or testing may be performed unless the QCM is on the work site. The QCM shall report to the Project Manager. The QCM, On-Site Project Superintendent and Project Manager shall work together effectively to provide a well-managed contract and to provide a quality product. Although the QCM is the primary individual responsible for quality control, all individuals will be held responsible for the quality of work on the job.

1.4.2 Preliminary Work Authorized Prior to Acceptance: Mobilization, staging and storing of material and equipment, and work may not begin until the contract QC Plan has been approved by the Contracting Officer and Contracting Officer's Representative.

1.4.3 Acceptance: Acceptance of the QC Plan is required prior to the start of mobilization and construction. The Contracting Officer reserves the right to require changes in the QC Plan and operations as necessary, including removal of personnel, to ensure the specified quality of work. The Contracting Officer reserves the right to interview any member of the QC organization at any time in order to verify the submitted qualifications.

1.4.4 Notification of Changes: Notify the Contracting Officer, in writing, of any proposed change to the QC Plan, including changes in the QC organization personnel, within 7-calendar days prior to any QC personnel performing any form of quality control on this contract. Proposed changes shall be subject to review and approval by the Contracting Officer.

1.5 QC ORGANIZATION

1.5.1 QC Manager

1.5.1.1 Duties

- a. The QCM shall have full authority and responsibility to assure that the performance objectives and standards identified in this contract are fully met. The QCM is required to attend the Preperformance Conference Meeting and all task order preconstruction meetings, conduct QC meetings with the PM and PS, perform the three phases of control, perform submittal review, approval and certification, ensure testing is performed and recorded, and provide all other necessary QC certifications and documentation as required by this contract. The QCM is responsible for managing and coordinating the three phases of control and documentation for subcontractor work. The QCM assigned to a respective Activity may roam from one in-progress project job site to another within the premises of the respective Activity.
- b. The QCM may not be the SSHO, however the QCM may be assigned the collateral responsibility of enforcing safety under this contract under the supervision of the SSHO. The Contractor shall submit an appointment letter and the required safety training certifications if assigned the collateral duty of enforcing safety. The designated QCM shall answer directly to the SSHO for all safety matters. The designated QCM shall document on the Safety Inspection Report that site safety inspections are being performed. The QCM Safety Inspection Report shall be submitted with that day's Contractor Daily Production Report. The QCM may not be the same person as the PM and PS. The QCM shall meet the following requirement to act on behalf of the SSHO:
 1. A minimum of 5-years safety work on similar size projects;
 2. Has completed the 30-hour 29 CFR 1926 OSHA Construction Safety Training Certificate Program completed within the last five (5) years, certificate required;
 3. Has completed the 40-hour Army Corps of Engineers EM-385-1-1 Training Program, certificate required;
 4. Has attended an average of 24-hours of annual formal safety training for each year for the past four (4) years.
 5. Has completed the 29 CFR 1926 OSHA Construction Competent Person Safety Training within the last five (5) years, certificate required.
 6. Successfully completed the Environmental Compliance Awareness Training (ECATT) Program, certificate required.

1.5.1.2 The QCM may be the Environmental Manager. The QCM shall have the qualifications as specified in Section 01 35 40.00 20, Environmental Management.

1.5.1.3 The QCM shall not act as a superintendent, job site competent person, supervisor, foreman, crew leader or leadman, nor shall the QCM be a worker on any task order projects during the duration of this contract.

1.5.2 Qualifications: The QCM shall have a minimum of three years combined experience performing as a superintendent, inspector, QCM, project manager, or construction manager on similar size and types of construction contracts. The QCM shall know and fully understand the

contents of the Army Corps of Engineers Manual EM 385-1-1 and have experience in the areas of hazard identification and safety compliance.

- a. Construction Quality Management Training: In addition to the above experience and education requirements, the QC Manager shall have completed the course Construction Quality Management for Contractors within 6-months after award of this contract and shall maintain a current certificate. A copy of the QCM's course completion certificate shall be submitted within five (5) calendar days upon completion of the course. The Contracting Officer will direct the Contractor to remove personnel that are acting on behalf of the Contract as a QCM and which has not completed the Construction Quality Management course in the allotted time as specified.

1.5.2 Alternate QC Manager Duties and Qualifications: The Contractor shall designate an alternate QCM to serve in the event of the designated QCM's absence. The period of absence may not exceed four weeks at one time, and not more than 30-calendar during a calendar year. The qualification requirements for the Alternate QC Manager shall be the same as for the QCM.

1.5.3 Newly appointed QCM's shall meet the requirements listed above. The Contractor shall submit qualification as stated herein, to the Contracting Officer and Contracting Officer's Representative prior to the proposed QCM assuming the responsibility as QCM. Submit the qualification submittals to the Contracting Officer and Contracting Officer's Representative for review and approval.

1.6 QC PLAN

1.6.1 Submit the complete QC Plan review and approval of the Contracting Officer and Contracting Officer's Representative. The CQC Plan shall be submitted in a three-ring binder and assembled in tabular format that includes a table of contents listing the following:

I. QC ORGANIZATION: A chart showing the QC organizational structure and its relationship to the production side of the organization.

II. NAMES AND QUALIFICATIONS: In resume format, for each person in the QC organization. Include the certification for completing Construction Quality Management Training.

III. DUTIES, RESPONSIBILITY AND AUTHORITY OF QC PERSONAL: Of each person in the QC organization.

IV. OUTSIDE ORGANIZATIONS: A listing of outside organizations such as architectural and consulting engineering firms that will be employed by the Contractor and a description of the services these firms will provide.

V. APPOINTMENT LETTERS: Letters signed by an officer of the firm appointing the QCM Alternate QCM and stating that they are responsible for managing and implementing the QC program as specified herein. Include in this letter the QCM's authority to direct the removal and replacement of non-conforming work.

VI. SUBMITTAL PROCEDURES AND INITIAL SUBMITTAL REGISTER: Procedures for reviewing, approving and managing submittals. Provide the name(s)

of the person(s) in the QC organization authorized to review and certify submittals prior to approval.

VII. TESTING LABORATORY INFORMATION: Testing laboratory information required by the paragraphs "Accredited Laboratories" or "Testing Laboratory Requirements."

VIII. TESTING PLAN AND LOG: A Testing Plan and Log that includes the tests required, referenced by the specification paragraph number requiring the test, the frequency, and the person responsible for each test.

IX. PROCEDURES TO COMPLETE REWORK ITEMS: Procedures to identify, record, track and complete rework items.

X. DOCUMENTATION PROCEDURES: Use Government formats.

XI. LIST OF DEFINABLE FEATURES: A Definable Feature of Work (DFOW) is a task, which is separate and distinct from other tasks, has the same control requirements and work crews. The list shall be cross-referenced to the Contractor's Construction Schedule and the specification sections. A Progress Chart the lists definable features of work and includes, but not be limited to, all items of work on the schedule.

XII. PROCEDURES FOR PERFORMING THREE PHASES OF CONTROL: For each DFOW provide Preparatory and Initial Phase Checklists. Each list shall include a breakdown of quality checks that will be used when performing the quality control functions, inspections, and tests required by the contract documents. The preparatory and initial phases shall be conducted with a view towards obtaining quality construction by planning ahead and identifying potential problems.

XIII. PERSONNEL MATRIX: Not Applicable.

XIV. PROCEDURES FOR COMPLETION INSPECTION: See the paragraph entitled "COMPLETION INSPECTIONS".

XV. TRAINING PROCEDURES AND TRAINING LOG: Not Applicable.

1.7 CONTRACT PREPERFORMANCE CONFERENCE MEETING

1.7.1 Contract Preperformance Conference Meeting: The purpose of the meeting is to develop a mutual understanding of the QC program, to include administration, management, implementation and documentation for on-site and off-site work, and the coordination of the Contractor's CQC personnel. The Contractor shall submit the complete QC Plan at the Preperformance Conference Meeting. The Contractor shall introduce who the proposed QCM(s) will be for the contract. The Contractor shall be fully prepared to discuss the quality control processes as defined in the QC Plan. Processes shall include how assessment and quality control will be performed on future awarded task orders, the three phases of quality control, inspection and certification of materials and equipment, record keeping, inspection and testing, inspecting all phases of work for deficiencies and construction defects, and the corrective action procedures that will be implemented. The QCM, PM, PS, and SSHO shall attend these meetings. Minutes of the meeting shall be prepared by the Contractor, signed by the Contractor and the Contracting Officer, and distributed to all in

attendance within five-calendar days after the meeting has been conducted. The Contractor Officer reserves the right to dispute and clarify areas of disagreement. The Contractor shall revise the minutes once the two parties are in agreement. The Contractor shall redistribute the minutes within five-calendar days of reaching an agreement.

1.7.1.1 Once the QC Plan has been approved by the Contracting Officer, the Contractor shall implement the quality control procedures as approved in the QC Plan for all future awarded task orders.

1.8 QC MEETINGS

1.8.1 The QCM shall schedule with the Contracting Officer's Representative a date and time to conduct the QC meetings. The QC meetings shall be conducted once a week while work is in progress. The meetings shall be conducted in the FSC Conference Room. The QCM shall take minutes of the meeting and submit a copy to the Contracting Officer and Contracting Officer's Representative within two-calendar days after the meeting has been concluded. At minimum the following shall be accomplished at each meeting:

- a. Review the minutes of the previous meeting;
- b. Review the schedule and the status of work and rework;
- c. Review the status of materials being used to the approved submittals;
- d. Review the work to be accomplished in the next two weeks;
- e. Review special inspections and testing;
- f. Resolve QC and production problems (RFIs, etc.);
- g. Address items that may require revising the CQC Plan; and
- h. Review Accident Prevention Plan (APP) and Activity Hazard Analysis (AHA).

1.9 THREE PHASES OF CONTROL

1.9.1 Preparatory Phase: Notify the Contracting Officer and Contracting Officer's Representative at least two working days in advance of each preparatory phase. Conduct the preparatory phase meeting with the PS and the foreman/crew leader/leadman responsible for the scheduled definable feature of work. Document the results of the preparatory phase actions in the Contractor's Daily Production Report and in the QC checklist. Perform the following prior to beginning work on each definable feature of work:

- a. Review each paragraph of the applicable technical sections.
- b. Review the contract drawings.
- c. Verify that appropriate shop drawings and submittals for materials and equipment have been submitted and approved. Verify receipt of approved factory test results, when required.

- d. Review the testing plan and ensure that provisions have been made to provide the required QC testing.
- e. Examine the work area to ensure that the required preliminary work has been completed.
- f. Examine the required materials, equipment and sample work to ensure that they are on hand and conform to the approved shop drawings and submitted data.
- g. Review the APP and AHA to ensure that applicable safety requirements are met, and that required Material Safety Data Sheets (MSDS) are submitted.
- h. Discuss the specific controls used and the construction methods and the approach that will be used to provide quality construction by planning ahead and identifying potential problems for each task order statement of work.

1.9.2 Initial Phase: Notify the Contracting Officer and Contracting Officer's Representative at least two work days in advance of each initial phase. When construction crews are ready to start work on a task order, The QCM and PS shall conduct the Initial Phase meeting with the foreman/crew leader/leadman responsible for defined work. Observe the initial segment of the work to ensure that it complies with the contract requirements. Document the results of the Initial Phase in the Contractor's Daily Production Report and in the QC checklist. Perform the following for each definable feature of work:

- a. Establish the quality of workmanship required.
- b. Resolve conflicts.
- c. Ensure that testing is performed by the approved laboratory.
- d. Check work procedures for compliance with the APP and the AHA to ensure that applicable safety requirements are met.

1.9.3 Follow-Up Phase: The QCM and PS shall perform the following for on-going work daily or more frequently as necessary until the completion of each task order project and provide documentation in the Contractor's Daily Production Report and in the QC checklist. Perform the following for each definable feature of work:

- a. Ensure the work is in compliance with contract requirements;
- b. Maintain the quality of workmanship required;
- c. Ensure that testing is performed by the approved laboratory;
- d. Ensure that rework items are being corrected; and
- e. Assure manufacturers' representatives have performed necessary inspections, if required.

1.9.4 Additional Preparatory and Initial Phases: Additional preparatory and initial phases shall be conducted on the same task order project if the quality of on-going work is unacceptable, if there

are changes in the QC organization, if there are changes in the PS or work crew, if work on a task order is resumed after a substantial period of inactivity, or if other problems develop.

1.9.5 Notification of Three Phases of Control for Off-Site Work: Notify the Contracting Officer and Contracting Officer's Representative at least two weeks prior to the start of the preparatory and initial phases.

1.10 SUBMITTAL REVIEW AND APPROVAL

1.10.1 Procedures for submission, review, and approval of submittals are described Section 01 33 00 "Submittal Procedures."

1.11 TESTING

1.11.1 Perform sampling and testing as required in this section and as specified in an approved Task Order Plan/Work Order Plan (TOPWOP).

1.11.2 Accreditation Requirements, Task Order Specific: Construction materials testing laboratories shall be accredited by a laboratory accreditation authority. The Contractor shall submit a copy of the Certificate of Accreditation and Scope of Accreditation to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order for review and approval. Work that requires testing may not begin until the submittal has been approved. Once approved, the Contractor does not need to re-submit in the future, e.g. if the Contractor plans to use the same accredited laboratory. The laboratory's scope of accreditation shall include the appropriate ASTM standards (i.e.; E 329, C 1077, D 3666, D 3740, A 880, E 543) listed in the technical sections of the specifications. Laboratories engaged in Hazardous Materials Testing shall meet the requirements of OSHA and EPA requirements. The policy applies to the specific laboratory performing the actual testing, not just the "Corporate Office."

1.11.3 Laboratory Accreditation Authorities: Laboratory Accreditation Authorities include the National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology, the American Association of State Highway and Transportation Officials (AASHTO), International Accreditation Services, Inc. (IAS), U. S. Army Corps of Engineers Materials Testing Center (MTC), and the American Association for Laboratory Accreditation (A2LA).

1.11.4 Capability Check: The Contracting Officer retains the right to check laboratory equipment in the proposed laboratory, in the field, and the laboratory technician's testing procedures, techniques, and other items pertinent to testing, for compliance with the standards set forth by the Laboratory Accreditation Authorities and the requirements found in this contract.

1.11.5 Test Results: Cite applicable tests or analytical procedures used. Include a statement in the Contractor Quality Control Report that the item(s) tested or analyzed conforms or fails to conform to applicable standards. If the item fails to conform, notify the Contracting Officer and Contracting Officer's Representative immediately. Conspicuously stamp the cover sheet for each report in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements, whichever is applicable. Test results shall be signed by the approved testing laboratory representative authorized to sign certified test reports. Furnish the signed reports, certifications, and other documentation to the Contracting Officer as part of the Contractor's Daily Production Report. Submit the day after receipt of the signed reports, certifications, and other documentation.

1.12 QC CERTIFICATIONS

1.12.1 Contractor Quality Control Report Certification: Each QC Report shall contain the following statement: "On behalf of the Contractor, I certify that this report is complete and correct and equipment and material used and work performed during this reporting period is in compliance with the contract and task order submittals, drawings and specifications to the best of my knowledge except as noted in this report."

1.12.2 Invoice Certification: Furnish a certificate to the Contracting Officer with each payment request, signed by the QCM, attesting that record drawings are being maintained current and attesting that the work for which payment is requested, including stored material, is in compliance with contract requirements.

1.12.3 Completion Certification: Upon completion of work on a task order, the QCM shall submit a certificate to the Contracting Officer and Contracting Officer's Representative attesting that testing has been performed, inspected and is in compliance with the contract specifications and with the approved Task Order Plan/Work Plan (TOPWOP).

1.13 COMPLETION INSPECTIONS

1.13.1 Punch-List Inspection: Near the completion of all work or any increment thereof established by a completion time stated in the Contract clause "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the QCM shall conduct daily inspections of all work in progress. The QCM shall develop a punch list of items which do not conform to the contract and approved Task Order Plan/Work Order Plan (TOPWOP), to include approved drawings and other specifications. Include in the punch list any remaining items of the "Rework Items List", which were not corrected prior to the Punch-List inspection. The punch list shall include the estimated date by which all deficiencies and construction defects will be corrected. A copy of the completed punch list shall be submitted to Contracting Officer and Contracting Officer's Representative for review within two working days prior to scheduling a "Pre-Final Inspection.". The QCM shall make follow-on inspections to ascertain that all deficiencies and construction defects have been corrected. Once this is accomplished, the PS and QCM shall schedule the "Pre-Final Inspection" with the Contracting Officer's Representative.

1.13.2 Pre-Final Inspection: The Contracting Officer's Representative, the PS and QCM shall perform this inspection to verify that the task order requirements are complete. The PS or QCM shall schedule the "Pre-Final Inspection" with the Contracting Officer's Representative at least two-calendar days prior to the conducting the "Pre-Final Inspection." A pre-final punch list may be developed by the Contracting Officer's Representative as a result of this inspection. The QCM shall ensure that all items on this list are corrected prior to scheduling a "Final Acceptance Inspection."

1.13.3 Final Acceptance Inspection: The QCM, PS, and the Contracting Officer's Representative shall be in attendance at this inspection. The Contracting Officer and customer may also be invited to attend this inspection. The "Final Acceptance Inspection" will be formally scheduled by the Contractor after all discrepancies on "Pre-Final Inspection" have been corrected and all work is found to be complete. The PS or QCM shall schedule the "Final Acceptance Inspection" with the Contracting Officer's Representative at least two-calendar days prior to the conducting the "Final Acceptance Inspection." The notice shall state that all specific items previously identified to the Contractor as being unacceptable will be complete by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all task order work acceptably completed for this

inspection and by the task order "Completion Due Date" will be cause for the Contracting Officer to charge liquidated damages to the Contractor in accordance with the contract clause " Liquidated Damages – Construction."

1.14 DOCUMENTATION

1.14.1 Maintain current and complete records of on-site and off-site operations and activities in accordance with the approved QC Plan. The forms identified under the paragraph "INFORMATION FOR THE CONTRACTING OFFICER" shall be used. Contractor Daily Production Report and Contractor Quality Control Report are required for each day's work that is performed. Account for each calendar day from the start of work on a task order through to the "Final Acceptance Inspection." Every space on the forms shall be filled in. Use N/A if nothing can be reported on in one of the spaces. The PS and the QCM shall prepare and sign the Contractor Daily Production Report and the QC Report, respectively. The reporting of work shall be identified by terminology consistent with the approved task order construction schedule. The "remarks" section in this report contains pertinent information, including directions received, problems encountered during construction, work progress and delays, conflicts or errors in the drawings or specifications, field changes, safety hazards encountered, instructions given and corrective actions taken, delays encountered and a record of visitors at the work site. For each remark given, identify the Schedule Activity No. that is associated with the remark.

1.14.2 Quality Control Validation: Establish and maintain the following in a series of three ring binders. Binders shall be divided and assembled in tabular format. These binders shall be readily available to the Government's Quality Assurance Team during all business hours. Provide the following information:

- a. All completed Preparatory and Initial Phase Checklists, arranged by specification section.
- b. All milestone inspections, arranged by Activity/Event Number.
- c. A current up-to-date copy of the Testing and Plan Log with supporting field test reports, arranged by specification section.
- d. Copies of all contract modifications, arranged in numerical order. Also include documentation that modified work was accomplished.
- e. A current up-to-date copy of the Rework Items List.
- f. Maintain up-to-date copies of all punch lists issued by the QC Staff on the Contractor and Subcontractors and all punch lists issued by the COR.

1.14.2 Record Shop Drawings: When Record Shop Drawings are specified in a task order Statement of Intent or when the Government provides as-built drawings, the QCM shall review the Record Shop Drawings or Government provided as-built drawings for accuracy and completeness prior to start of work. The Record Shop Drawings or Government provided as-built drawings shall be kept current on a daily basis and marked to show all deviations and revisions. Ensure each deviation or revision has been identified with the appropriate modifying documentation, e.g. task order number, modification number, RFI number, etc. The QCM shall initial each deviation or revision. Upon completion of work, the QCM shall submit the Record Shop Drawings or

Government provided as-built drawings as red lined Record As-Built drawings in accordance with contract Section 01 78 00 CLOSEOUT SUBMITTALS.

1.15 NOTIFICATION ON NON-COMPLIANCE

1.15.1 The Contracting Officer or Contracting Officer's Representative will notify the Contractor of any non-compliant work performed under a contract task order with accompanying comments for corrective action. The Contractor shall take immediate action to correct all and construction defects. If the Contractor fails or refuses to correct the non-compliant work, the Contracting Officer will issue a noncompliance notice. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. The Contractor shall not request for damages the Contractor has incurred due to such stop orders, or submit a request for a time extension, for excess costs, or for any other damages.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION 01 57 19.00 20

TEMPORARY ENVIRONMENTAL CONTROLS

02/10

PART 1 GENERAL

For information in regards to the environment at Marine Corps Base Camp Pendleton Environmental Security visit: <http://www.pendleton.usmc.mil/base/environmental/>

For information in regards to the environment other than Marine Corps Base Camp Pendleton, contact the Contracting Officer or the respective Activity's Environmental security Office.

1.1 REFERENCES

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

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 530/F-93/004	(1993; Rev O; Updates I, II, IIA, IIB, and III) Test Methods for Evaluating Solid Waste (Vol IA, IB, IC, and II) (SW-846)
EPA 833-R-060-04	(2000) Developing Your Storm Water Pollution Prevention Plan, a Guide for Construction Sites

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 40 CFR 112 Oil Pollution Prevention
40 CFR 122.26	Storm Water Discharges (Applicable to Great State of California NPDES Programs, see section 123.25)
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 262	Standards Applicable to Generators of Hazardous Waste
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 270	EPA Administered Permit Programs: The Hazardous Waste Permit Program
40 CFR 271	Requirements for Authorization For State Hazardous Waste Programs
40 CFR 272	Approved State Hazardous Waste Management Programs
40 CFR 273	Standards For Universal Waste Management
40 CFR 279	Standards for the Management of Used Oil
40 CFR 280	Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)
40 CFR 300	National Oil and Hazardous Substances Pollution Contingency Plan
40 CFR 355	Emergency Planning and Notification
40 CFR 372-SUBPART D	Specific Toxic Chemical Listings

40 CFR 761	Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
40 CFR 82	Protection of Stratospheric Ozone
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

1.2 DEFINITIONS

1.2.1 Sediment: Soil and other debris that has eroded and has been transported by runoff water or wind.

1.2.2 Solid Waste: Garbage, refuse, debris, sludge, or other discharged material, including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations. Types of solid waste typically generated at construction sites may include:

- a. Green Waste: The vegetative matter from landscaping, 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.
- b. Surplus Soil: 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.
- c. Debris: Non-hazardous solid material generated during the construction, demolition, or renovation of a structure which exceeds 60 mm (2.5 inch) particle size that is a manufactured object; plant or animal matter; or natural geologic material (e.g. 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.

- d. Wood: Dimension and non-dimension lumber, plywood, chipboard, hardboard. Treated and/or painted wood that meets the definition of lead contaminated or lead based contaminated paint is not included.
- e. Scrap Metal: 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.
- f. Paint Cans: Metal cans that are empty of paints, solvents, thinners and adhesives. If permitted by the paint can label, a thin dry film may remain in the can.
- g. Recyclables: Materials, equipment and assemblies such as doors, windows, door and window frames, plumbing fixtures, glazing and mirrors that are recovered and sold as recyclable. 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 may be included as recyclable if sold to a scrap metal company.
- h. Hazardous Waste: By definition, to be a hazardous waste a material shall first meet the definition of a solid waste. Hazardous waste and hazardous debris are special cases of solid waste. They have additional regulatory controls and shall be handled separately. They are thus defined separately in this document. Hazardous waste may not be disposed of at any Marine Corps Base Camp Pendleton landfill and shall be disposed of at an approved disposal site.

1.2.3 Material not regulated as solid waste are 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.

1.2.4 Hazardous Debris: As defined in Solid Waste paragraph, debris that contains listed hazardous waste (either on the debris surface, or in its interstices, such as pore structure) per 40 CFR 261; or debris that exhibits a characteristic of hazardous waste per 40 CFR 261.

1.2.5 Chemical Wastes: This includes salts, acids, alkalizes, herbicides, pesticides, and organic chemicals.

1.2.6 Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

1.2.7 Hazardous Waste: Any discarded material, liquid, solid, or gas, which meets the definition of hazardous material or is designated hazardous waste by the Environmental Protection Agency or Great State of California Hazardous Control Authority as defined in 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, 40 CFR 268, 40 CFR 270, 40 CFR 271, 40 CFR 272, 40 CFR 273, 40 CFR 279, and 40 CFR 280.

1.2.8 Hazardous Materials: Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172.

1.2.8.1 Hazardous material is any material that:

- a. Is regulated as a hazardous material per 49 CFR 173, or
- b. Requires a Material Safety Data Sheet (MSDS) per 29 CFR 1910.120, or
- c. During end use, treatment, handling, packaging, storage, transpiration, 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.

1.2.8.2 Designation of a material by this definition, when separately regulated or controlled by other instructions or directives, does not eliminate the need for adherence to that hazard-specific guidance which takes precedence over this instruction for "control" purposes. Such material include 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). Nonetheless, the exposure may occur in the manufacture, storage, use and demilitarization of these items.

1.2.9 Waste Hazardous Material (WHM): Any waste material which because of its quantity, concentration, or physical, chemical, or infectious characteristics may pose a substantial hazard to human health or the environment and which has been so designated. Used oil not containing any hazardous waste, as defined above, falls under this definition.

1.2.10 Oily Waste: Those materials which are, or were, mixed with used oil and have become separated from that used oil. 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, used oil and may be appropriately tested and discarded in a manner which is in compliance with California State Water Resource Control Board, and other Great State of California and local requirements.

1.2.10.1 This definition includes materials such as oily rags, "kitty litter" absorbent clay and organic absorbent material. These materials may be disposed of at an approved landfill off of the respective Activity's premises provided that:

- a. It is not prohibited in other Great State of California regulations or local ordinances
- b. The amount generated is "de minimus" (a small amount)
- c. It is the result of minor leaks or spills resulting from normal process operations
- d. All free-flowing oil has been removed to the practical extent possible
- e. 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, a hazardous waste determination shall be performed 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.

1.2.11 Regulated Waste: Those solid waste that have specific additional Federal, Great State of California, other states, or local controls for handling, storage, or disposal.

1.2.12 Class I Ozone Depleting Substance (ODS):

1.2.12.1 Class I ODS is defined in Section 602(a) of The Clean Air Act and includes the following chemicals:

- chlorofluorocarbon-11 (CFC-11)
- chlorofluorocarbon-12 (CFC-12)
- chlorofluorocarbon-13 (CFC-13)
- chlorofluorocarbon-111 (CFC-111)
- chlorofluorocarbon-112 (CFC-112)
- chlorofluorocarbon-113 (CFC-113)
- chlorofluorocarbon-114 (CFC-114)
- chlorofluorocarbon-115 (CFC-115)
- chlorofluorocarbon-211 (CFC-211)
- chlorofluorocarbon-212 (CFC-212)
- chlorofluorocarbon-213 (CFC-213)
- chlorofluorocarbon-214 (CFC-214)
- chlorofluorocarbon-215 (CFC-215)
- chlorofluorocarbon-216 (CFC-216)
- chlorofluorocarbon-217 (CFC-217)
- chlorofluorocarbon-500 (CFC-500)
- chlorofluorocarbon-502 (CFC-502)
- chlorofluorocarbon-503 (CFC-503)
- halon-1211
- halon-1301
- halon-2402
- carbon tetrachloride
- methyl bromide
- methyl chloroform

1.2.12.2 Class II ODS is defined in Section 602(s) of The Clean Air Act and includes the following chemicals:

- hydrochlorofluorocarbon-21 (HCFC-21)
- hydrochlorofluorocarbon-22 (HCFC-22)
- hydrochlorofluorocarbon-31 (HCFC-31)
- hydrochlorofluorocarbon-121 (HCFC-121)
- hydrochlorofluorocarbon-122 (HCFC-122)
- hydrochlorofluorocarbon-123 (HCFC-123)
- hydrochlorofluorocarbon-124 (HCFC-124)
- hydrochlorofluorocarbon-131 (HCFC-131)
- hydrochlorofluorocarbon-132 (HCFC-132)
- hydrochlorofluorocarbon-133 (HCFC-133)
- hydrochlorofluorocarbon-141 (HCFC-141)
- hydrochlorofluorocarbon-142 (HCFC-142)
- hydrochlorofluorocarbon-221 (HCFC-221)
- hydrochlorofluorocarbon-222 (HCFC-222)
- hydrochlorofluorocarbon-223 (HCFC-223)
- hydrochlorofluorocarbon-224 (HCFC-224)
- hydrochlorofluorocarbon-225 (HCFC-225)
- hydrochlorofluorocarbon-226 (HCFC-226)

hydrochlorofluorocarbon-231 (HCFC-231)
hydrochlorofluorocarbon-232 (HCFC-232)
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hydrochlorofluorocarbon-251 (HCFC-251)
hydrochlorofluorocarbon-252 (HCFC-252)
hydrochlorofluorocarbon-253 (HCFC-253)
hydrochlorofluorocarbon-261 (HCFC-261)
hydrochlorofluorocarbon-262 (HCFC-262)
hydrochlorofluorocarbon-271 (HCFC-271)

1.2.13 Universal Waste: The universal waste regulations streamline collection requirements for certain hazardous wastes in the following categories: batteries, pesticides, mercury-containing equipment (e.g., thermostats) and lamps (e.g., 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.

1.3 ENVIRONMENTAL PROTECTION REQUIREMENTS

1.3.1 The Contractor shall comply with the approved Environmental Protection Plan per 01 35 40.00 20, Environmental Management. The requirements of this section shall be incorporated into the Environmental Protection Plan. The Contractor shall comply with all other regulatory requirements as they pertain to an awarded task order. Plan for and provide environmental protective measures to control pollution that develops during normal 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. Comply with Federal, Great State of California, San Diego County, the respective Activity's, and all other local government agency's regulations as they pertain to the environment, including water, air, soil, solid waste, hazardous waste and substances, oily substances, and noise pollution.

1.3.1.1 The Contractor may be required to promptly conduct tests and procedures for the purpose of assessing whether construction operations are in compliance with applicable environmental laws. Analytical work shall be done by qualified laboratories; and where required by law, the laboratories shall be certified.

1.3.2 The Environmental Protection Plan shall be submitted in the following format and shall include the elements specified below.

a. Description of the Environmental Protection Plan

1. General overview and purpose

- i. A descriptive plan that encompasses environmental aspects that may be encountered when performing construction operations on this contract. The plan shall incorporate the respective Activity's Environmental

Security Office's Natural Resource Plan and all other Federal, Great State of California and other local government agency's regulations.

- ii. The duties and level of authority assigned to the person(s) on the job site that oversee environmental compliance.
 - iii. A brief narration for the standard operating procedures that will be used to effectively manage and protect the environment when work is in progress on a task order.
 - iv. Communication and training procedures that will be used to convey environmental management requirements to Contractor employees and subcontractors.
 - v. Emergency contact information contact information (office phone number, cell phone number, and e-mail address).
2. A letter signed by an Officer of the Firm appointing the Environmental Manager and stating that that person is responsible for managing and implementing the approved Environmental Protection Plan. Include in this letter the Environmental Manager's authority to direct the removal and replacement of non-conforming work.
- b. Management of Natural Resources
- i. Land resources
 - ii. Tree protection
 - iii. Replacement of damaged landscape features
 - iv. Temporary construction
 - v. Stream crossings
 - vi. Fish and wildlife resources
 - vii. Wetland areas
- c. Protection of Historical and Archaeological Resources
- i. Objectives
 - ii. Methods
- d. Storm Water Management and Control
- i. Ground cover
 - ii. Erodible soils

- iii. Temporary measures
 - (a) Mechanical retardation and control of runoff
 - (b) Vegetation and mulch
 - iv. Effective selection, implementation and maintenance of Best Management Practices (BMPs).
- e. Protection of the Environment from Waste Derived from Contractor Operations
- i. Control and disposal of solid and sanitary waste. If Section 01 74 19 is included in the contract, submit the plan required by that section as part of the Environmental Protection Plan.
 - ii. Control and disposal of hazardous waste (Hazardous Waste Management Section)
 - iii. This item will consist of the management procedures for all hazardous waste to be generated. The elements of those procedures will coincide with the Activity Hazardous Waste Management Plan. A copy of the Activity Hazardous Waste Management Plan will be provided, upon request, by the Contracting Officer's Representative. As a minimum, include the following:
 - (a) Procedures to be employed to ensure a written waste determination is made for appropriate wastes which are to be generated;
 - (b) Sampling/analysis plan;
 - (c) Methods of hazardous waste accumulation/storage (i.e., in tanks and/or containers);
 - (d) Management procedures for storage, labeling, transportation, and disposal of waste (treatment of waste is not allowed unless specifically noted);
 - (e) Management procedures and regulatory documentation ensuring disposal of hazardous waste complies with Land Disposal Restrictions (40 CFR 268);
 - (f) Management procedures for recyclable hazardous materials such as lead-acid batteries, used oil, and the like;
 - (g) Used oil management procedures in accordance with 40 CFR 279;
 - (h) Pollution prevention\hazardous waste minimization procedures;
 - (i) Plans for the disposal of hazardous waste by permitted facilities;
 - (j) Procedures to be employed to ensure all required employee training records are maintained.

- f. Prevention of Releases to the Environment
 - i. Procedures to prevent releases to the environment
 - ii. Notifications in the event of a release to the environment
- g. Regulatory Notification and Permits

List what notifications and permit applications shall be made. Demonstrate that those permits have been obtained by including copies of all applicable, environmental permits.

1.3.2.1 Environmental Protection Plan Review: Within 15-calendar days after award of this contract, submit the proposed Environmental Protection Plan to the Contracting Officer and Contracting Officer's Representative for review and approval. Mobilization and commencement of work will not begin until the Environmental Protection Plan has been approved.

1.3.3 Licenses and Permits: Obtain the necessary licenses and permits that will be required to perform construction operations on this contract pursuant to the "Permits and Responsibilities" FAR Clause 52.236-7.

1.3.3.1 No permits will be obtained by the Contracting Officer.

1.3.3.2 Where required by the State of California regulatory authority, the inspections and certifications shall be provided through the services of a Professional Engineer (PE) that is registered in the Great State of California. Where a PE is not required, the individual shall be otherwise qualified by other current Great State of California licensure, specific training and prior experience (minimum 3 years). As required on a task order, the Contractor shall submit a sub item containing the name, appropriate professional registration or license number, address, and telephone number of the professionals or other qualified persons who will be performing the inspections and certifications for each permit to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order for review and approval. The service shall not be implemented until the submittal has been approved.

1.3.4 Manifesting of Hazardous Waste: All hazardous waste shall be manifested through each Activity's Environmental Security Office in accordance with the Activity's regulations and guidelines.

1.3.4.1 Marine Corps Air Station Miramar Hazmat Generator ID: All Hazardous Wastes/Hazardous Material leaving MCAS Miramar must be manifested through the MCAS Miramar Environmental Management Department (EMD) Waste Management Division, and be assigned a MCAS Miramar Generator Number. Notify EMD a minimum of one week prior to manifesting HAZWASTE/HAZMAT off station. All HAZWASTE/HAZMAT must be inspected by EMD at Bldg. 6317 (northwest end) just prior to leaving the station. EMD Point Of Contact: Mr. P. Mike Corona, e-mail: paul.corona@usmc.mil, or general reception at (858) 577-1108. Preprinted copy of manifest must be delivered to EMD POC for review, via electronic mail, at least 24 hours in advance of requested delivery date. Additionally, HAZWASTE/HAZMAT must not be stored on station more than 60 calendar days from its initial removal/containerizing.

1.4 ENVIRONMENTAL MANAGEMENT

1.4.1 Environmental Manager: The Contractor shall appoint an Environmental Manager to manage the environment requirements for the contract. The Environmental Manager will be directly responsible for coordinating all work is in compliance with all Federal, Great State of California, San Diego County, the respective Activity's Environmental Security Office, Naval Weapons Station Seal Beach Fallbrook Detachment Office, and other local regulations. When applicable, the Environmental Manager will ensure compliance; implementation of the Environmental Protection Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Best Management Practices (BMP) requirements; ensure compliance with hazardous materials requirements (storage, handling, transporting, disposal, and reporting); and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position that one of the Contractor's QCM may assume the responsibility; however the person in this position shall be trained to adequately accomplish the following duties: ensure waste segregation and storage compatibility requirements are met; inspect and manage satellite accumulation areas; ensure only authorized personnel add wastes to containers; ensure all Contractor personnel are trained in 40 CFR requirements in accordance with their position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out.

1.4.2 Environmental Compliance Assessment Training and Tracking System (ECATTS)

1. The Environmental Manager is responsible for environmental compliance on projects. The Environmental Manager shall complete ECATTS training prior to starting on-site work under this contract. Training can be accomplished at <http://navfac.ecatts.com> . If personnel changes occur for any of these positions after starting work, replacement personnel shall complete ECATTS training within 30-calendar days after award of this contract.
2. Register for NAVFAC Environmental Compliance Training and Tracking System, by logging on to <http://navfac.ecatts.com/>. Obtain the password for registration from the Contracting Officer.
3. This training has been structured to allow Contractor personnel to receive credit under this contract and also to carry forward credit to future contracts. The Contractor shall ensure that the Environmental Manager reviews their training plans for new modules or updated training requirements. Some training modules are tailored for specific Great State of California regulatory requirements; therefore, if the Contractor is working in multiple states they will be required to re-take modules tailored to the Great State of California where the contract work is being performed.
4. ECATTS is available for use by all Contractor and subcontractor personnel. All Contractor and subcontractor personnel are encouraged (but not required) to take the training and may do so at their discretion.

1.4.3 Conformance with the Activity Environmental Natural Resource Pan: The Contractor shall perform work consistent with the policy and objectives identified in the respective Activity's Environmental Security Office's Natural Resource Plan. The Contractor shall perform work that is consistent with the environmental policy and objectives that are in place at Naval Weapons Station Seal Beach Fallbrook Detachment. The Contractor shall perform work in a manner that conforms

to objectives and targets, environmental programs and operational controls identified by the plans and policies. The Contractor shall provide monitoring and measurement information as necessary to address environmental performance relative to environmental, energy, and transportation management goals. The Contractor's Environmental Manager shall ensure that all staff, subcontractors, and tradesmen are trained and fully aware of their roles and responsibilities as defined by the approved Environment Management Plan, to also include the respective Activity's Environmental Security Office's Natural Resource environmental policies prior to and while performing awarded task order work.

Visit Marine Corps Base Camp Pendleton Environmental Security Office's for in detail information :<http://www.pendleton.marines.mil/StaffAgencies/EnvironmentalSecurity/NaturalResourcesManagementPlan.aspx>

Or, Contact the respective Activity's Environmental Security Office's for in detail information.

1.5 QUALITY ASSURANCE

1.5.1 Environmental Site Survey: The Environmental Manager shall perform an environmental site survey of each awarded task order project site prior to mobilization and start of work with the Contracting Officer's Representative. The Environmental Manager shall take photographs showing existing environmental conditions in and adjacent to the project site. Submit a report, to include the photographs, to the Contracting Officer's Representative prior to mobilization and start of work record. The photographs shall be identified with the location, e.g. area, North, West East or South.

1.5.1.1 The Environmental Manager shall review each Category Exclusion or Decision Memorandum and ensure that the Project Superintendent, subcontractors, site supervisors, and tradesmen are informed of the requirements. The Environmental Manager is responsible for oversight and enforcement of the requirements.

1.5.2 Regulatory Notifications: The Contractor is responsible for all regulatory notifications to applicable the perspective agencies prior to mobilizing and starting work on an awarded task order. In cases where the respective Activity shall also provide public notification (such as stormwater permitting), the Contractor shall coordinate efforts with the Contracting Officer's Representative and the respective Activity's Environmental Security Office. The Contractor shall submit copies of all regulatory notifications to the Contracting Officer and Contracting Officer's Representative prior to mobilizing and commencement of work activities. Typically, regulatory notifications shall be provided for the following (this listing is not all inclusive): demolition, renovation, NPDES defined site work, remediation of controlled substances (asbestos, hazardous waste, lead paint), etc.

1.6 ENVIRONMENTAL BRIEF

1.6.1 The Environmental Manager shall present task order environmental briefs at the Task Order Preconstruction Meeting. The Environmental Manager shall provide the following information: Measures that will be taken and enforced to ensure strict compliance with the approved Environmental Protection Plan, Category Exclusion or Decision Memorandum. The Environmental Manager shall discuss mobilization, laydown and staging procedures, the definable environmental measures to be implemented in accordance with the approved Task Order Work Plan/Work Order Plan and the process of oversight and enforcement. The briefing shall develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural resources, required reports, required permits, permit requirements, and other measures to be taken.

1.7 CONTRACTOR 40 CFR EMPLOYEE TRAINING RECORDS

1.7.1 As applicable, the Environmental Manager shall maintain employee training records throughout the term of the contract meeting applicable 40 CFR requirements. The Contractor shall ensure every employee completes a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures compliance with all Federal, Great State of California, San Diego County, the respective Activity, and other local regulatory requirements for RCRA. The Contractor will provide a position description for each employee, to include subcontractor employees, based on the Davis-Bacon Wage Rate designation or other equivalent method, evaluating the employee's association with hazardous and regulated wastes. The position description will include training requirements as defined in 40 CFR 265. The Environmental Manager shall submit the training records to the Contracting Officer upon request.

1.8 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Environmental Compliance Assessment Training and Tracking System (ECATTS); GA, KO, PO

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 ENVIRONMENTAL PROTECTION PLAN

3.1.1 The Environmental Manager shall train all personnel that will be involved in the project site construction operations prior to starting work. The training shall encompass the approved Environmental Protection Plan and any Category Exclusion or Decision Memorandum that has been issued for a task order. Submit a roster of personnel that received the environmental training as part of that day's Contractor Daily production Report.

3.1.2 The Environmental Manager shall monitor the project site on a daily basis to ensure all environmental requirements and regulations are being adhered. The Environmental Manager shall enforce the environmental requirements and regulations at all times. The Environmental Manager shall document all environmental violations and corrective measures taken on the Contractor daily Production Report. The Environmental Manager shall contact the Contracting Officer and Contracting Officer's Representative immediately of any egregious violations that occur.

3.2 PROTECTION OF NATURAL RESOURCES

3.2.1 Preserve the natural resources within and outside of the task order project boundaries. Restore the project site and adjacent areas to an equivalent or improved conditions upon completion of work. Confine construction operations to within the limits of the work specified in a Category Exclusion or Decision Memorandum. If the work is near streams, lakes, or other waterways, conform to the national permitting requirements of the Clean Water Act.

3.2.1.1 Do not disturb fish and wildlife. 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 indicated or specified in a task order.

3.2.1.2 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.

3.2.1.3 Protect existing trees which are to remain. Remove displaced rocks from uncleared areas. Remove trees and other landscape features scarred or damaged by equipment operations, and replace with equivalent, undamaged trees and landscape features in accordance with the respective Activity's Base Exterior Architectural Plan (BEAP) or in accordance with the respective Activity's requirements. Obtain Contracting Officer's approval before replacement.

3.2.1.4 The Contractor shall receive approval from the Contracting Officer and the respective Activity's Environmental Security Office approval before any equipment will be permitted to ford live streams. In areas where frequent crossings are required, alternative methods such as the installation of temporary culverts or bridges may be performed. 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 specified by Contracting Officer or the respective Activity's Environmental Security Office.

3.2.2 Erosion and Sediment Control Measures

3.2.2.1 Burnoff of the ground cover is not permitted.

3.2.2.2 Protection of Erodible Soils: Immediately finish the earthwork brought to a final grade, as indicated or specified in a task order. Immediately protect the side slopes and back slopes upon completion of rough grading. Plan and conduct earthwork to minimize the duration of exposure of unprotected soils.

3.2.2.3 Temporary Protection of Erodible Soils

- a. Use the following methods to prevent erosion and control sedimentation:
 - i. Mechanical Retardation and Control of Runoff: As specified in a task order, mechanically retard and control the rate of runoff from the construction site. This includes construction of diversion ditches, benches, berms, and use of silt fences and straw bales to retard and divert runoff to protected drainage courses.
- b. Sediment Basins

- i. As specified in a task order, trap sediment in temporary sediment basins. Select a basin size to accommodate the runoff of a local 100-year storm. Pump dry and remove the accumulated sediment, after each storm. Use a paved weir or vertical overflow pipe for overflow. Remove collected sediment from the site. Institute effluent quality monitoring programs.
 - ii. Install, inspect, and maintain best management practices (BMPs) on all task orders or perform controls as required by a general permit. Prepare BMP Inspection Reports as required by a general permit. f required by the permit, include those inspection reports.
- c. Vegetation and Mulch
- i. When specified on a task order, provide temporary protection on sides and back slopes as soon as rough grading is completed or sufficient soil is exposed to require erosion protection. Protect slopes by accelerated growth of permanent vegetation, temporary vegetation, mulching, or netting. Stabilize slopes by hydroseeding, anchoring mulch in place, covering with anchored netting, sodding, or such combination of these and other methods necessary for effective erosion control.
 - ii. When specified on a task order, place new seeding where the ground has been disturbed by construction operations. The seed type will be specified on a task order. Include topsoil or nutriment during the seeding operation necessary to establish or reestablish a suitable stand of grass.

3.3 HISTORICAL AND ARCHAEOLOGICAL RESOURCES

3.3.1 Carefully protect in-place known historical and archaeological items or human skeletal remains. Stop work and immediately report discovered historical and archaeological items or human skeletal remains that have been found in the course of construction operations to the Contracting Officer, Contracting Officer's Representative, and the respective Activity's Environmental Security Office. The Government retains ownership and control over historical and archaeological resources.

3.4 SOLID WASTE MANAGEMENT PLAN (WMP)

3.4.1 Implement the approved Waste Management Plan for each task order. See Section 01 74 19, "Construction and Demolition Waste Management" for more information.

3.4.2 Control and Management of Solid Wastes:

- a. Pick up solid wastes, and place in covered containers. Containers shall be 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, police the area and leave the area clean. Recycling is mandatory. Recycling aboard the respective Activity can be coordinated with the Contracting Officer's Representative and the Base Recycling Center Manager. The Contractor shall remove all solid waste from project site and dispose off-site at an approved landfill. Solid waste disposed of off-site shall comply with all Federal, San Diego County, Great State of California, and local governing agency's regulations including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

- b. Manage and dispose of hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, in accordance with all Federal, Great State of California, the respective Activity', and other local government agency's regulations.

3.4.1.3 Solid Waste Containers: The term "Container" is defined to mean dumpster, bin, and roll-off. The Contractor shall supply containers at the project sites as necessary. The Contractor shall not use Government owned containers to dispose of solid waste, debris or hazardous materials/waste. Contractor supplied containers shall be equipped with secure lids or covers, be slightly in appearance (painted and maintained) and shall not leak. Keep lids on dumpsters and bins closed at all times, except when being loaded with trash and debris. Cover roll-off's at the end of the work shift. Locate containers within the construction zone and in accordance with the Category Exclusion or Decision Memorandum issued against a task order. Place the container(s) out of the public's view. Empty containers at least once a week or more frequently as needed to keep the site free of debris and trash.

3.5 CONTRACTOR HAZARDOUS MATERIAL INVENTORY LOG

3.5.1 Submit the "Contractor Hazardous Material Inventory Log, when applicable,"(found at: <http://www.wbdg.org/ccb/NAVGRAPH/graphoc.pdf>), which provides information required by (EPCRA Sections 312 and 313) along with corresponding Material Safety Data Sheets (MSDS) to the Contracting Officer and Contracting Officer's Representative at the start and at the end of construction (five calendar days after the "Final Acceptance Inspection"), and update no later than January 31 of each calendar year during the life of the contract. Documentation for any spills/releases, environmental reports or off-site transfers may be requested by the Contracting Officer and Contracting Officer's Representative at any time.

3.5.2 Disposal Documentation for Hazardous and Regulated Waste:

3.5.2.1 Manifest, pack, ship and dispose of hazardous or toxic waste and universal waste that is generated as a result of construction in accordance with the generating facilities generator status under the Resource Conservation and Recovery Act. Manifest hazardous waste through the respective Activity's Environmental Security Office.

3.5.2.2 Submit a copy of the applicable EPA and state permit(s), manifest(s), or license(s) for transportation, treatment, storage, and disposal of hazardous and regulated waste by permitted facilities. Hazardous or toxic waste manifest shall be reviewed, signed, and approved by the respective Activity's Environmental Security Office before the Contractor may ship waste. To obtain specific disposal instructions the Contractor shall coordinate with the efforts with the respective Activity's Environmental Security Office through the Contracting Officer's Representative.

3.6 POLLUTION PREVENTION/HAZARDOUS WASTE MINIMIZATION

3.6.1 Minimize the use of hazardous materials and the generation of hazardous waste. Include procedures for pollution prevention/ hazardous waste minimization in the Hazardous Waste Management section of the Environmental Protection Plan. Consult with the respective Activity Environmental Security Office going through the Contracting Officer's Representative for suggestions and to obtain a copy of the installation's pollution prevention/hazardous waste

minimization plan for reference material when preparing this part of the plan. Describe the types of the hazardous materials expected to be used during construction when requesting information.

3.7 WHM/HW MATERIALS PROHIBITION

3.7.1 No hazardous material or hazardous waste shall be disposed of on Government property. No hazardous material shall be brought onto Activity property that does not have the approval of the Contracting Officer. The intent of this provision is to dispose of that waste identified as waste hazardous material/hazardous waste as defined herein that was generated by the Contractor during construction operations or existed on the project site prior to construction operations. Incidental materials used to support the construction operations including, but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, rags, clothing, etc. is the responsibility of the Contractor to manage and dispose of properly. The Contractor shall not discharge any materials into the waste water collection systems, storm water collection systems, or into any estuary or waterway.

3.8 HAZARDOUS MATERIAL MANAGEMENT

3.8.1 Include hazardous material control procedures in the Safety and Health Plan. Address procedures and proper handling of hazardous materials, including the appropriate transportation requirements. Submit a MSDS and estimated quantities to be used for each hazardous material to the Contracting Officer and Contracting Officer's Representative prior to bringing the material onto the Activity. Typical materials requiring MSDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, chemicals, and petroleum products. At the end of each task order project as part of the Closeout submittal, submit to the Contracting Officer's Representative the maximum quantity of each material/product that was present at the site at any one time, the dates the material was present, the amount of each material that was used during the project, and how the material was used. Ensure that hazardous materials are utilized in a manner that will minimize the amount of hazardous waste that is generated. Ensure that all containers of hazardous materials have NFPA labels or their equivalent. Keep copies of the MSDS for hazardous materials on site at all times and submit the MSDS's to the Contracting Officer's representative within 15-calendar days after award of a task order. The Environmental Manager shall certify that all hazardous materials have been removed from a project site and the hazardous materials have been disposed of in accordance with the Federal and state regulations.

3.9 PETROLEUM PRODUCTS AND REFUELING

3.9.1 Conduct the fueling and lubricating of equipment and motor vehicles in a manner that protects against spills and evaporation. Manage all used oil generated on site in accordance with 40 CFR 279. Determine if any used oil generated while on-site exhibits a characteristic of hazardous waste. Used oil containing 1000 parts per million of solvents will be considered a hazardous waste and disposed of at Contractor's expense. Used oil mixed with a hazardous waste will also be considered a hazardous waste. The Contractor shall not store fuel, lubricating products, hydraulic fluids, or any other petroleum based products on the Activities premises.

3.10 OILY AND HAZARDOUS SUBSTANCES

3.10.1 Prevent oil or hazardous substances from entering the ground, adjacent habitat, waste water collection systems, storm water collection systems, and estuaries and waterways.

3.10.2 Inadvertent Discovery of Petroleum Contaminated Soil or Hazardous Wastes: If petroleum contaminated soil or suspected hazardous waste is found during construction operations that was not identified in a task order, the Contractor shall immediately notify the Contracting Officer and Contracting Officer's Representative. The Contractor shall not disturb this material until authorized by the Contracting Officer.

3.11 FUEL TANKS

3.11.1 Temporary fuel, lubricating, hydraulic or other petroleum product storage tanks are not allowed to be stored on Activities property.

3.12 RELEASES/SPILLS OF OIL AND HAZARDOUS SUBSTANCES

3.12.1 Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, hydraulic fluid, and other substances regulated by environmental law. 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 hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the respective Activity's Fire Department (dial 911), the respective Activity Environmental Security Office Hazardous Waste Branch, Contracting Officer and Contracting Officer's Representative. If the Contractor's response is inadequate, the respective Activity's Hazardous Waste Spill Team may respond.

3.12.2 The Contractor is responsible to provide verbal and written notifications as required by the 40 CFR 355 to the Contracting Officer and Contracting Officer's Representative. Spill response will be in accordance with 40 CFR 300 and in accordance with the applicable Great State of California, San Diego County, the respective Activity's Environmental Security Office and other local government agency's regulations. Contain and clean up these spills at no cost to the Government. Provide copies of the written notification and documentation within 20-calendar days stating that a verbal notification was made. Maintain spill cleanup equipment and materials at each project site. Clean up all hazardous and non-hazardous (WHM) waste spills.

- a. The Contractor shall reimburse the Government for all costs incurred, including sample analysis materials, equipment, and labor if the Government must initiate its own spill cleanup procedures, applicable to spills caused by the Contractor, when:
 - i. The Contractor has not begun spill cleanup procedure within 30-minutes of discovery/occurrence of the spill, or
 - ii. If, in the Contracting Officer's judgment upon receiving information from the the respective Activity's Environmental Security Office and the respective Activity's Fire Department, the Contractor's spill cleanup efforts are not adequately abating life threatening situation and/or is a threat to any body of water or environmentally sensitive areas.

3.13 CONTROL AND MANAGEMENT OF HAZARDOUS WASTES

3.13.1 Facility Hazardous Waste Generator Status: All work conducted within the boundaries of the respective Activity shall meet the regulatory requirements of the generator's designation. The Contractor will comply with all provisions of Federal, Great State of California, San Diego County,

the respective Activity's Environmental Security Office, and other local government agency's regulatory requirements applicable to this generator status regarding training and storage, handling, and disposal of all construction derived wastes.

3.13.2 Hazardous Waste/Debris Management: Identify all construction operations which will generate hazardous waste/debris. Provide a documented waste determination for all resultant waste streams. Hazardous waste/debris will be identified, labeled, handled, stored, and disposed of in accordance with all Federal, Great State of California, 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.

3.13.2.1 Hazardous waste will also be managed in accordance with the approved Hazardous Waste Management section of the Environmental Protection Plan. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of the Activities will be identified as being generated by the Government.

3.13.2.2 Prior to removal of any hazardous waste from the Activities property, all hazardous waste manifests shall be signed by the respective Activity's Environmental Security Office Hazardous Waste Branch. No hazardous waste will be brought onto the Activities property. Submit 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 to the Contracting Officer and Contracting Officer's Representative. For hazardous wastes spills, verbally notify the Contracting Officer, Contracting Officer's Representative, and the respective Activity immediately.

- a. Regulated Waste Storage/Satellite Accumulation/60 Day Storage Areas
- b. If the work requires the temporary storage/collection of regulated or hazardous wastes, the Contractor will request the establishment of a Regulated Waste Storage Area, a Satellite Accumulation Area, or a 60 Day Storage Area at the point of generation. The Contractor shall submit a request in writing to the Contracting Officer providing the following information:

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 Site Plan to the Request)

- c. Attach a waste determination form. Allow ten working days for processing this request. The designated area where the hazardous waste is being stored shall be barricaded and a sign identifying the site as follows:

DANGER - UNAUTHORIZED PERSONNEL KEEP OUT"

3.13.3 Sampling and Analysis of HW

- a) Waste Sampling: Sample waste in accordance with EPA 530/F-93/004. Each sampled drum or container will be clearly marked with the Contractor's identification number and cross referenced to the chemical analysis performed.
- b) Laboratory Analysis: Follow the analytical procedure and methods in accordance with the 40 CFR 261. The Contractor will provide all analytical results and reports to the Contracting Officer and Contracting Officer's Representative.
- c) Analysis Type: Identify waste hazardous material/hazardous waste by analyzing for the following properties as a minimum: ignitability, corrosiveness, total chlorides, BTU value, PCBs, TCLP for heavy metals, and cyanide.

3.13.4 Asbestos Certification:

3.13.4.1 Items, components, or materials disturbed by or included in work under this contract may involve asbestos containing materials. Other materials in the general area around where work area contain asbestos containing materials.

3.13.4.2 Inadvertent discovery of non-disclosed asbestos that will result in an abatement action requires a change in scope before proceeding. Upon discovery of asbestos containing material not identified in a task order, the Contractor shall immediately stop all work that would generate further damage to the material, evacuate the asbestos exposed area, and notify the Contracting Officer and Contracting Officer's Representative for resolution of the situation prior to resuming normal work activities in the affected area. The Contractor shall not remove or perform work on any asbestos containing materials without the prior approval of the Contracting Officer. The Contractor shall not engage in any activity which would remove or damage such materials or cause the generation of fibers from such materials.

3.13.4.3 Asbestos containing waste shall be managed and disposed of in accordance with Federal and Great State of California, other states, the respective Activity's Environmental Security Office, and Naval Weapons Station Seal Beach Fallbrook Detachment environmental office regulations. Asbestos containing waste shall be manifested through the respective Activity's Hazardous Waste Branch.

3.13.4.4 Marine Corps Air Station Miramar Hazmat Generator ID: All Hazardous Wastes/Hazardous Material leaving MCAS Miramar must be manifested through the MCAS Miramar Environmental Management Department (EMD) Waste Management Division, and be assigned a MCAS Miramar Generator Number. Notify EMD a minimum of one week prior to manifesting HAZWASTE/HAZMAT off station. All HAZWASTE/HAZMAT must be inspected by EMD at Bldg. 6317 (northwest end) just prior to leaving the station. EMD Point Of Contact: Mr. P. Mike Corona, e-mail: paul.corona@usmc.mil, or general reception at (858) 577-1108. Preprinted copy of manifest must be delivered to EMD POC for review, via electronic mail, at least 24 hours in advance of requested delivery date. Additionally, HAZWASTE/HAZMAT must not be stored on station more than 60 calendar days from its initial removal/containerizing

3.13.5 Hazardous Waste Disposal:

3.13.5.1 No hazardous, toxic, or universal waste shall be disposed of or shall a hazardous material be abandoned on any respective Activity's premises. The disposal of incidental materials used to

accomplish the work during construction operations including, but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, rags, clothing, etc. are the responsibility of the Contractor to manage and properly dispose of.

3.13.5.2 The Contractor is not authorized to discharge any materials into the Activities waste water collection systems, storm water systems, or estuaries and waterways.

3.13.5.3 Responsibilities for Contractor's Disposal

- a. Any generation of WHM/HW requiring Contractor disposal procedures.
- b. The Contractor agrees to provide all services necessary for the final treatment and disposal of the hazardous material/waste in accordance with all Federal, Great State of California, the respective Activity's Environmental Security Office and other states regulations, and the terms and conditions as specified in a task order within sixty (60) days after the materials have been generated. These services will include all necessary personnel, labor, transportation, packaging, detailed analysis, transportation, disposal, permits and associated fees, including manifesting or completing waste profile sheets, equipment, and the administration and record keeping of all documentation is required.
- c. Contain all waste in accordance with 40 CFR 260, 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, 40 CFR 268, 40 CFR 270, 40 CFR 272, 40 CFR 273, 40 CFR 279, 40 CFR 280, and 40 CFR 761.
- d. Obtain a representative sample of the material generated at each project site to provide waste stream determination.
- e. Analyzation of each representative sample taken, to include submitting analytical results to the Contracting Officer's Representative. Submit two copies of the results.
- f. Determine the DOT proper shipping names for all waste (each container requiring disposal) and shall demonstrate how this determination is developed which shall be supported by the sampling and analytical results.

3.13.6 Class I and II ODS Prohibition: Class I and II ODS, as defined and identified herein, shall not be used in the performance of this contract, nor be provided as product in any piece of installed equipment. This prohibition will be considered to prevail over any other provision, specification, drawing, or referenced documents. Regulations related to the protection of stratosphere ozone may be found in 40 CFR 82.

3.13.7 Universal Waste/e-Waste Management: Universal waste, including but not limited to, is mercury containing building products such florescent lamps, mercury vapor lamps, high pressure sodium lamps, CRTs, batteries, aerosol paint containers, electrical equipment containing PCBs, and consumed electronic devices. Universal waste shall be managed in accordance with applicable Federal, Great State of California, the respective Activity's Environmental Security Office, and other states regulations.

3.14 DUST CONTROL

3.14.1 Implement the approved Dust Control Plan. See Section 02 41 00, Site Demolition for more information

3.14.2 Keep dust down at all times, including during nonworking periods. Water excavation areas, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted on paved roads. Instead wet power brooming. 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.

3.14.3 Dust Control Plan: Submit truck and material haul routes along with a plan for controlling dirt, from accumulating on roadways.

3.15 ABRASIVE BLASTING

3.15.1 The use of silica sand for sand blasting is prohibited.

3.16 NOISE

3.16.1 Use low-noise emission products only that are certified by the EPA.

3.17 MERCURY MATERIALS

3.17.1 The use of mercury is prohibited, 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 solid waste containers or rubbish containers is prohibited. Remove mercury-containing materials and devices without breaking them, pack them to prevent breakage, and transport materials and devices off of the respective Activity's premises in an unbroken condition for disposal at an approved recycle facility. Immediately report to the Contracting Officer, Contracting Officer's Representative, and the respective Activity's Environmental Security Office, of instances of breakage or mercury spillage. Clean the mercury spillage areas to the satisfaction of the Contracting Officer, the respective Activity's Environmental Security Office.

3.17.2 Cleanup of a mercury spill shall not be recycled and shall be managed as a hazardous waste and disposed of in accordance with all Federal, Great State of California, the respective Activity Environmental Security Office and other government agency's regulations.

-- End of Section --

SECTION 01 57 20.00 20

ENVIRONMENTAL PROTECTION

04/06

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1(2008) Safety and Health Requirements Manual

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

33 CFR 328 Definitions of Waters of the United States of America

40 CFR 150 – 189 Pesticide Programs

40 CFR 260 Hazardous Waste Management System: General

40 CFR 261 Identification and Listing of Hazardous Waste

40 CFR 262 Standards Applicable to Generators of Hazardous Waste

40 CFR 279 Standards for the Management of Used Oil

40 CFR 302 Designation, Reportable Quantities, and Notification

40 CFR 355 Emergency Planning and Notification

40 CFR 68 Chemical Accident Prevention Provisions

49 CFR 171 – 178 Hazardous Materials Regulations

1.2 DEFINITIONS

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

1.2.2 Environmental Protection: Environmental protection is the prevention and 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.

1.2.3 Contractor Generated Hazardous Waste: Contractor generated hazardous waste means 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, petroleum products, excess paint thinners (i.e. methylethylketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.

1.2.4 Land Application for Discharge Water: The term "Land Application" for discharge of water implies that the Contractor shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into stormwater collection systems, sanitary wastewater collection systems or discharge into defined drainage areas, or discharge into the "Waters of the United States of America" shall occur. Land Application shall be in compliance with all applicable Federal, Great State of California, California State Waters Resources Control Board, San Diego County, the respective Activity's Environmental Security Office, and other local government agency's regulations.

1.2.5 Pesticide: Pesticide is defined as any substance or mixture of substances intended for preventing, destroying, repelling, mitigating any pest, or is intended for use as a plant regulator, defoliant or desiccant.

1.2.6 Pests: The term "pests" means arthropods, birds, rodents, nematodes, fungi, bacteria, viruses, algae, snails, marine borers, snakes, weeds and other organisms (except for human or animal disease-causing organisms) that adversely affect readiness, military operations, or the well-being of personnel and animals; attack or damage real property, supplies, equipment, or vegetation; or are otherwise undesirable.

1.2.7 Surface Discharge: The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, stormwater collection systems, creeks, and/or "Waters of the United States of America" and therefore, require a permit to discharge water from the governing agency.

1.2.8 Waters of the United States of America: All waters which are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328.

1.2.9 Wetlands: Those areas that are inundated or saturated by surface or ground water 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. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland shall be done in accordance with WETLAND MANUAL.

1.3 GENERAL REQUIREMENTS

1.3.1 Minimize environmental pollution and damage that are a product of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent work shall be protected during construction operations. Comply with all applicable

Federal, State of California, California State Waters Resources Control Board, San Diego County, the respective Activity's Environmental Security, and other local government agency's regulations.

1.4 SUBCONTRACTORS

1.4.1 The Environmental Manager shall ensure that their subcontractors are in compliance with the environmental requirements as stated herein.

1.5 SUBMITTALS

1.5.1 Reference SECTION 01 35 40.00 20 "Environmental Management" for submittal requirements.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 LAND RESOURCES

3.2.1 Confine all activities to areas defined by the approved Task Order Plan/Work Order Plan and approved record shop drawings. The Environmental Manager shall identify all natural resources to be preserved within the work area prior to mobilization, staging and storing of materials and equipment, and beginning of construction operations. Do not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without prior approval. Provide effective protection for land and vegetation resources at all times, as defined in the following subparagraphs. Remove stone, soil, or other materials displaced into uncleared areas.

3.2.2 Work Area Limits: Mark the areas that are not be disturbed prior to commencing construction operations. Mark areas, as specified in an issued Category Exclusion or Decision Memorandum against a task order, within the general work area which are not to be disturbed. Mark and protect monuments and markers before construction operations commence. Markers shall be visible where construction operations are to be conducted during darkness. The Contractor's personnel shall be knowledgeable of the purpose for marking and/or protecting particular objects.

3.2.3 Landscape: Trees, shrubs, vines, grasses, land forms and other landscape features indicated in a task order's Statement of Intent, on the approved Task Order Plan/Work Order Plan and on the approved record shop drawings to be preserved shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques. Restore landscape features damaged or destroyed during construction operations outside the limits of the approved work area.

3.2.4 Contractor Facilities and Work Areas: Stage or store materials and equipment in areas as predicated by the issued Category Exclusion or Decision Memorandum. Temporary movement or relocation of the staging or storage area may be made only when approved by the Contracting Officer and Contracting Officer's Representative. Erosion and sediment controls shall be provided to prevent sediment from entering into storm water systems and nearby estuaries and waterways.

3.3 WATER RESOURCES

3.3.1 The Environmental Manager shall monitor all areas affected by construction operations to prevent pollution of the surface and ground waters. Do not apply toxic or hazardous chemicals to soil or vegetation. For construction operations immediately adjacent to surface waters, the Contractor shall be capable of quantifying sediment or pollutant loading in the surface water when required to do so by Clean Water Act permits.

3.3.2 Wetlands: Do not enter, disturb, destroy, or allow discharge of contaminants or pollutants into any wetlands. The protection of wetlands as indicated on contract task order drawings or in the statement of work shall be the Contractor's responsibility. Authorization to enter specific wetlands as identified in the contract task order will not relieve the Contractor from any obligation to protect other wetlands within, adjacent to, or in the vicinity of the construction site and associated boundaries.

3.4 AIR RESOURCES

3.4.1 Equipment operation, activities, or processes will be in accordance with all Federal, Great State of California, and San Diego Air Pollution Control District air emission and performance laws and standards.

3.4.1.1 Permit Requirement: Any equipment or operation requiring an operating permit, a construction permit or operating permit to construct from the San Diego County Air Pollution Control District or any regulatory body shall be obtained by the owner/operator of that equipment/operation. Contractors, in consultation with Environmental Management Department, shall be responsible for obtaining, fees paid, and processing required for any permitted equipment or operation they install, repair, or modify within the respective Activity. Acceptance by Environmental Management Department of a valid permit to operate the installed equipment or operation is a condition for final disposition of the contract by the contract agent for the government. Examples of such equipment and operations are, but not limited to, any non-mobile equipment utilizing an internal combustion engine greater than 50 bhp (diesel fueled electrical generators, lighting units, air compressors, etc.), rock crushing operation, and concrete batching operation. The use of off-road diesel vehicles during construction, such as but not limited to, loaders, crawler tractors, skid steers, backhoes, and forklifts with engines rated at 25 bhp or greater shall comply with California Air Resources Board (CARB) regulations (CCR 13 Section 2449).

3.4.2 Particulates: Dust particles; aerosols and gaseous by-products used at construction sites, and any processing and preparation of materials on the construction site shall 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, spoil areas, and other work areas within or outside the project boundaries free from particulates which would cause the Federal, Great State of California, and San Diego Air Pollution Control District set air pollution standards to be exceeded or which would cause a hazard or a nuisance. Watering will be permitted to control particulates in the work area. Watering, to be efficient, shall be repeated to keep the disturbed area damp at all times. 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 all Federal, Great State of California and San Diego Air Pollution Control District visibility regulations. Reference: San Diego County Air Pollution Control District Rules 51, 54, and 55.

3.4.3 Odors: Odors from construction activities shall be controlled at all times. The odors shall be in compliance with Federal, Great State of California, San Diego Air Pollution Control District

regulations and other government environmental agencies regulations and may not constitute a health hazard.

3.4.4 Cutback and Emulsified Asphalt: The use of cutback and emulsified asphalts as paving materials for parking lots, driveways, and similar structures shall conform to San Diego County Air Pollution District Rule 67.7. Operators of equipment used in this process must obtain permit, if required, from local and/or state regulators. Reference: <http://www.sdapcd.org/rules/Reg4pdf/R67-7.pdf>

3.4.5 Paints and Coatings: Paints and coating products must comply with the San Diego Air Pollution Control District (SDAPCD) requirements outlined in SDAPCD Rule 67.0 – Architectural Coatings. Reference: <http://www.sdapcd.org/rules/Reg4pdf/R67-0.pdf>

3.4.6 Asbestos: Ensure any asbestos containing material (ACM) resulting from demolition is managed in accordance with San Diego Air Pollution Control District Regulation XI Subpart M, National Emissions Standards for Asbestos, specifically Rules 361.140/141/145/152. This includes notification and reporting requirements. Reference: <http://www.sdapcd.org/rules/Appendiz/AppenB/SubpM.pdf>

3.4.7 Asphalt and Roofing Material Applications: Ensure the roofing kettle (used to heat asphalt) is permitted with the San Diego County Air Pollution Control District (SDAPCD) if it has a capacity of 85 gallons or more per SDAPCD Rule 11(d)(19)(iii). Reference: <http://www.sdapcd.org/rules/Reg2pdf/R11.pdf>

Also ensure the roof coating used has a volatile organic compound (VOC) content of 2.1 lbs/gallon (250 grams/liter) or less, per SDAPCD Rule 67.0. Reference: <http://www.sdapcd.org/rules/Reg4pdf/R67-0.pdf>

3.4.8 Containers: Paint and solvent containers must be leak free and closed at all times when not in use. Reference: San Diego Air Pollution Control District Rule 67.17. Reference: <http://www.sdapcd.org/rules/Reg4pdf/R67-17.pdf>

3.4.9 Street Sweeping Machines: Street sweeping machines that have separate engine driven dust collection apparatus must be permitted by the San Diego Air Pollution Control District (SDAPCD) if that engine is 50 bhp or greater. Reference: SDAPCD Rule 12.1 (Registration of Portable Equipment). Reference: <http://www.sdapcd.org/rules/Reg2pdf/R12-1.pdf>

3.4.10 Abrasive Blasting: Abrasive blasting operations must comply with San Diego Air Pollution Control District Rule 71 (Abrasive Blasting), Reference: <http://www.sdapcd.org/rules/Reg4pdf/R70-71.pdf>; and permitting requirements in accordance with Rule 11(d)(9), Reference: <http://www.sdapcd.org/rules/Reg2pdf/R11.pdf>

3.4.11 SF6 Gas Insulated Switchgear (GIS): For compliance with California Air Resources Board (CARB) regulations, all SF6 gas insulated switchgears (GIS) must be inventoried and reported. For existing SF6 GIS to be removed, if any, and new SF6 GIS to be installed, submit the following information to EMD (ATTN: Luis Eria) for each equipment:

- Serial Number
- Seal Type (Hermetic/Non-hermetic)
- Manufacturer
- Date of Manufacture

- Voltage Capacity
- SF6 Capacity (in lbs.)
- Physical Address/Location

3.4.12 Spill Prevention Control and Countermeasures (SPCC).

3.4.12.1 Temporary Sites. Temporary construction/repair/modification/maintenance activities that involve the storage of oils and/or hazardous materials in quantities equal or greater than 55-gal or more are required to implement Spill Prevention Control & Countermeasures (SPCC) requirements as presented in 40 CFR 112, Marine Corps Order (MCO) P5090.2A, Chapter 7 and MCAS Miramar SPCC Plan December 2010 Volume II Section 7.38. This includes any container used for standby storage, seasonal storage, temporary storage, or not otherwise considered "permanently closed." Additionally, spill containment structures must be provided to prevent spills, leaks and unauthorized discharges. Contact S-7, Environmental Management Department, at (858) 577-1623 with any questions concerning SPCC.

3.4.12.2 Aboveground Fuel Storage Tank (AST). Any aboveground storage tank installed must have proper secondary containment for the tank and piping. Reference: 40 CFR 112.7 (e)(2). Ensure that the proposed ASTs are double-walled and follow all requirements imposed by SPCC, NFPA 30 and state/local regulations for the storage of flammable and combustible materials. This includes secondary containment, overfill protection, leak monitoring, venting, signage, grounding, etc. The fuel tank must also be Underwriter's Laboratory (U/L) certified for the storage of flammable/combustible liquids.

3.4.12.3 Emergency Generators. Ensure that the fuel tank for the proposed emergency generator is double-walled and follows all requirements imposed by Spill Prevention Control & Countermeasures (SPCC), NFPA 30 and state/local regulations for the storage of flammable and combustible materials. This includes secondary containment, overfill protection, leak monitoring, venting, signage, etc.". The fuel tank must also be UL certified for the storage of flammable/combustible liquids.

3.4.12.4 Electrical Transformers. Ensure the electrical transformer has properly sized secondary containment if it contains 55 gallons or greater of insulating oil/fluid and procedures are implemented to monitor the same in accordance with 40CFR112 and the respective Activity's SPCC Plan.

3.4.12.5 Buried Piping. Provide buried piping with a protective wrapping and coating as well as cathodic protection per California and federal SPCC regulations, 40CFR112.8(d).

3.4.12.6 AST Removal And Disposal. Aboveground Storage Tank (AST): If an AST system, including the associated piping, needs to be removed and disposed of, it shall be done in accordance with local (San Diego County) and state (California) regulations. Title 22 California Code of Regulations (CCR) Division 4.5 Chapter 32 Section 67383 Management of Tanks pertains

3.5 Lead and Asbestos Environmental Contract Language Provisions relating to asbestos, lead based paint, and other hazardous materials connected to, and hazardous wastes generated in the course of, any renovation and demolition work.

3.5.1 General

- i. The Contractor is presumed to know the legal requirements connected to the work being undertaken, by itself directly, or indirectly, as through an agent, employee, consultant, subcontractor, partner or other indirect means. The Contractor shall be responsible to pay all fines, penalties or other monetary damages that are assessed against the Government for acts or omissions of the Contractor, or the Contractor's agent, employee, consultant, subcontractor, partner or other representative or instrumentality.

Fines, penalties and other monetary damages include amounts agreed to by the Government to settle alleged violations, even where the Government admits no violation. Contractor may pay the Government's settlement amount to the settlement authority on behalf of the Government or to the Government. The Government may pursue delinquent amounts through debt collection procedures which may involve payment of interest, or through simple offset or holdback of moneys due the Contractor under other Contracts.

- ii. Compliance with the requirements set out in this subsection is not a guarantee that no regulatory enforcement agency will issue notices of violation or take other enforcement actions. The Contractor remains responsible for these types of alleged violations and this subsection of the Contract recognizes that reasonable settlements with regulatory agencies are often made notwithstanding the possible existence of various defenses, simply because of business considerations including but not limited to the high cost or uncertainty of litigation.
- iii. Nothing in this section precludes the Contractor from employing whatever agent, employee, consultant, subcontractor, partner, or other representative or instrumentality allowed elsewhere under this Contract to carry out the various duties necessary for compliance with this subsection and applicable law.
- iv. All lead and asbestos abatement plans shall be reviewed by Contracting Officer's Representative (COR). Without review and approval by the COR, the Contractor is NOT authorized to conduct abatement.
- v. If a facility has not had a survey for Asbestos Containing Material (ACM) and Lead-Based Paint (LBP) performed prior to facility sustainment, demolition or renovation (regardless of the age of the structure or suspect materials to be disturbed), the Contractor shall hire an independent State of California accredited laboratory to conduct a survey of the facility, taking samples to identify, screen and/or test for ACM, LBP, and other hazardous materials. The respective Activity's responsible persons can be consulted to determine if their existing data is available. The Contractor shall be compensated for performing surveys, sampling and testing of ACM, LBP or other hazardous materials.
- vi. All work performed by the Contractor shall be in compliance with all applicable laws, rules, regulations, and guidance which may include, but are not limited to, the following:
 - Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA)
 - Clean Air Act (CAA)

- Clean Water Act (CWA)
 - San Diego Air Pollution Control District (APCD) Rule 361.145
 - APCD Rule 50 (Visible Emissions)
 - Resource Conservation and Recovery Act (RCRA)
 - Safe Drinking Water Act (SWDA)
 - Toxic Substance Control Act (TSCA)
 - OPNAVINST 5090 Series, Environmental and Natural Resources Manual
 - NAVFACINST 5100.11 Series, Chapter 4
- vii. The most recent edition of any applicable law, rule, regulation, or guidance shall be in effect. Where conflict among the requirements exists, the most stringent requirements shall be in effect.

3.5.2 Asbestos

- i. The Contractor shall not install or use any asbestos containing material (ACM) (i.e., any material that contains more than 1% asbestos) nor any asbestos containing construction material (ACCM) (i.e., any manufactured construction material that contains more than 0.1% asbestos) at any time during this contract's performance periods. The Contractor shall submit a Certificate of ACM/ACCM-Free Construction certifying that all construction materials that were used or installed on each awarded task order project, including those supplied by third parties, are not ACM nor ACCM per Federal Acquisition Regulation (FAR) 52.223-3.
- ii. It is a regulatory requirement to sample all suspect asbestos-containing material (ACM) to be disturbed prior to facility renovation or demolition (per the federal National Emission Standards for Hazardous Air Pollutants (NESHAP), section 61.145, NAVFACINST 5100.11J, and Occupational Safety and Health Administration (OSHA) 1910.1001 (j)(2)(i)). All suspect materials to be disturbed are required to be sampled for the presence of asbestos regardless of the age of the structure or suspect materials. Typically, materials such as glass, wood, and metal are not considered suspect materials. Visual inspection is not an acceptable method to determine if suspect materials contain asbestos. Lab analysis of suspect material(s) is required to make such a determination. If valid asbestos data exist for the material(s) to be disturbed then no additional sampling of such material(s) is required.
- iii. All asbestos abatement work performed in California (CA) shall be performed by licensed and registered State of California asbestos abatement contractors (i.e., registered by the CA Division of Occupational Safety and Health [of the CA Department of Industrial Relations], and licensed with the CA Contractors State License Board).
- iv. For all asbestos-related demolition or removal, the Contractor shall hire a third-party Industrial Hygienist (IH) (who maintains certification as AHERA Project Designer and AHERA Constructor Supervisor), Certified Asbestos Consultant (CAC), or Site Safety Technician (SST) (under the direction of a CAC) on-site at all times during the abatement project (i.e., during working hours). The purpose of this individual is to act as an independent observer to ensure compliance with the approved work plan and all applicable regulatory requirements.

- v. All asbestos work plans for work performed in California shall be written by a State of California Certified Asbestos Consultant (CAC). This requirement applies regardless if the asbestos is friable or non-friable.
- vi. The Contractor shall provide a notice of intention (NOI) to the San Diego Air Pollution Control District (APCD) at least 10 working days prior to execution of work where the combined amount of RACM to be removed or stripped or similarly disturbed measures more than 260 linear feet on pipes and/or more than 160 square feet on other facility components. APCD Rule 361.145.
- vii. For projects that include both asbestos removal and demolition for the same regulated structure(s), the San Diego APCD should be notified on two separate NOI forms (i.e., one form for asbestos removal and the other for demolition). Each notification form shall be submitted with the respective notification fee.
- viii. Prior to submittal to the San Diego APCD, all NOIs shall be approved in writing by the respective Activity's responsible person.
- ix. An NOI shall be submitted to the APCD for all demolition (i.e., wrecking or taking out of any load-supporting structural member of facility) regardless of whether asbestos is present or not. This NOI shall be submitted at least 10 working days prior to execution of demolition work.
- x. Per APCD Rule 361.145, the Contractor shall provide the APCD with a new NOI whenever there is a change in the starting date for asbestos stripping or removal work or whenever the amount of asbestos affected changes by at least 20%.
- xi. Per APCD Rule 361.145, if asbestos stripping or removal or demolition will begin after the original start date (specified in the original NOI), the Contractor, with written consent from the respective Activity's responsible person, shall notify the APCD Control Officer of the new start date as soon as possible (ASAP), and before the original start date, and provide the APCD Control Officer with a new NOI (that specifies the new start date) ASAP, but no later than the original start date. If asbestos stripping or removal or demolition will begin earlier than the original start date, the Contractor shall, with written consent from the respective Activity's responsible person, shall provide the APCD Control Officer with an NOI at least 10 working days before the asbestos stripping or removal or demolition work begins.
- xii. The Contractor shall manage (i.e., abate, store, dispose of, and transport) all material containing asbestos and Asbestos Containing Material (ACM) in accordance with all applicable Federal, state, local, and Department of Defense (DoD) laws, rules, regulations, and guidance. In the State of California, the hazardous waste (HW) regulatory threshold for friable Asbestos Containing Waste is 1% by weight, at which point the friable waste becomes classified as a California non-RCRA HW.
- xiii. For asbestos that is a hazardous waste, the Contractor shall adhere to the manifesting procedure(s) specified in the Contractor Manifesting Procedure for Hazardous Waste (Shaw-CH), HW-05 006 of 10 Oct 10. Applicable laws, rules, regulations, and guidance may include, but are not limited to, the following:
 - 5 CFR 339.205 and 339.301 (Medical Qualification Determination)

- 29 CFR 1910.134 (Respiratory Protection)
- 29 CFR 1910.1001 (OSHA)
- 29 CFR 1926.1101 (OSHA)
- 40 CFR 61, Subpart M (NESHAP)
- 40 CFR 763, Subpart E
- APCD Rule 361.145
- APCD Rule 361.150
- California Code of Regulations (CCR) Title 8, Section 1529 (Asbestos)
- 42 U.S.C. Section 7401 et seq. of Nov 25 1990 (PL 101-549), Clean Air Act
- OPNAVIST 5100.23 Series, Navy Safety and Occupational Health Program Manual, Chapter 17
- NAVFACINST 5100.11 Series, NAVFAC Safety and Health Manual
- UFGS Section 02 82 16 “Engineering Control of Asbestos Containing Materials”

3.5.3 Lead

- i. For all lead-related demolition or removal, the Contractor shall hire a third-party State of California certified and accredited Industrial Hygienist (IH) on-site at all times during the abatement on task order projects (i.e., during working hours). The purpose of this individual is to act as an independent observer to ensure compliance with the approved work plan and all applicable regulatory requirements.
- ii. All lead abatement work plans for work performed in California shall be written by a CA Department of Public Health (CDPH) lead certified Project Designer, Project Monitor, or Supervisor per [Title 17, California Code of Regulations (CCR), Division 1, Chapter 8.
- iii. The Contractor shall manage (i.e., abate, store, dispose of, and transport) all material containing lead and LBP in accordance with all applicable Federal, state, local, and Department of Defense (DoD) laws, rules, regulations, and guidance. These applicable laws, rules, regulations, and guidance may include, but are not limited to, the following:
 - Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X)
29 CFR 1926.62 (OSHA – Lead Exposure in Construction)
29 CFR 1910.1025 (OSHA – Lead)
OPNAVINST 5100.23 Series, Chapter 21
NAVFACINST 5100.11 Series, Chapter 5
UFGS Section 02 82 33.13 (Removal and Disposal of Paint with Lead)
 - CCR, Title 17, Division 1, Chapter 8, § 35001 - 36100 Accreditation, Certification, and Work Practices for Lead-Based Paint and Lead Hazards
 - CCR, Title 8, Section 1532.1 et seq

3.6 SOUND INTRUSIONS: Keep construction activities under surveillance and control to minimize environment damage by noise. Comply with the provisions of the Federal, Great State of California and the respective Activity’s Environmental Security Office regulations.

3.7 BURNING

3.7.1 Burning is prohibited on the Activities premises.

3.8 WASTE DISPOSAL

3.8.1 The Contractor shall provide solid waste containers at the project sites, e.g. dumpsters and roll-off containers, as applicable. Solid wastes shall be disposed of off of the respective Activity's premises at an approved landfill facility.

3.8.2 The Contractor shall develop and maintain a Tracking Record of all disposed solid waste. Submit a Monthly Tracking Report at the end of each month to the Contracting Officer's Representative and to the FSC Technical Writer. The Monthly Tracking Report shall include the following information:

1. Landfill location
2. Date of disposal
3. Tonnage per vehicle
4. Vehicle license number
5. Name of driver
6. Copy of the landfill receipt
7. List of all landfill fees charged to the Contractor per load

3.8.3 The Contractor is not authorized to use or dispose of any solid waste, rubbish or recyclables into any of the Activities dumpsters and roll-off containers.

3.8.4 Contractor Generated Chemicals and Chemical Wastes: Dispose of chemicals and chemical waste off of the respective Activity's premises at an approved facility.

3.8.6 Disposal of wastewater is as follows:

3.8.6.1 Waste water produced from construction operations, such as on-site concrete curing, foundation and concrete clean-up, water used in concrete trucks, forms, etc. will not be allowed to enter waterways or allowed to leach into the ground. Dispose of construction related wastewater by collecting and placing it in a temporary retention pond where suspended material can be settled out and the water can evaporate to separate pollutants from the water. The site for the temporary retention pond shall be at a site as indicated on a Category Exclusion or Decision Memorandum issued against a task order.

3.8.6.2 For discharge of ground water, the Contractor will surface discharge in accordance with the requirements of the NPDES or Storm Water Pollution Prevention Plan permit.

3.8.6.3 Water generated from the flushing of lines after disinfection or disinfection in conjunction with hydrostatic testing will be land applied in accordance with the respective Activity's Environmental Security Office regulations, or it may be discharged into the wastewater collection system upon prior approval from the Activity's Wastewater Treatment Department supervisor.

3.9 RECYCLING AND WASTE MINIMIZATION

3.9.1 Participate in the respective Activity's recycling programs. The Contractor is encouraged to minimize solid waste generation throughout the performance period of this contract.

3.10 HISTORICAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.10.1 Existing historical, archaeological, and cultural resources within the Contractor's work area will be identified on a Category Exclusion or Decision Memorandum issued against a task order. The Environmental Manager shall be responsible for the protection of these resources and be responsible for their preservation prior to and through completion of construction operations. If during construction operations an unidentified or unanticipated historical, archaeological, and cultural resources are discovered or found, suspend work and contact the Contracting Officer and Contracting Officer's Representative immediately for further instruction. Secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing such resources. Resources covered by this paragraph include, but are not limited to, any human skeletal remains or burials; artifacts; shell, midden, bone, charcoal, or other deposits; rock or coral alignments, pavings, wall, or other constructed features and any indication of agricultural or other human activities.

3.11 BIOLOGICAL RESOURCES

3.11.1 The Environmental Manager shall ensure that construction operations minimize interference with, disturbance to, and damage to fish, wildlife, and plants including their habitat. The protection of threatened and endangered animal and plant species, including their habitat, is the Environmental Manager's responsibility. The Contractor shall implement a program, as part of their approved Environmental Protection Plan, to train personnel to identify and protect biological resources when performing construction work as specified in an approved Task Order Plan/Work Order Plan.

3.11.2 The Contractor's Environmental Manager shall ensure that measures are taken on each respective Activity to protect all threatened and endangered species are protected from construction operations. The adherence to the category exclusions/ Decision Memorandums and the Activity's environmental regulations is required at all times. To avoid potential violations contact the respective Activity's Environmental Security Office.

3.11.3 Marine Corps Air Station Miramar:

3.11.3.1 Gnatcatcher. All noise generating and ground disturbing work within 500 feet of a Coastal California Gnatcatcher nesting site is to be avoided during the period of 15 February through 1 September of each year. Verify known nesting sites with EMD, Point Of Contact: Mr. Dave Boyer at (858) 577-1125, e-mail david.a.boyer@usmc.mil, or general reception at (858) 577-1108.

3.11.3.2 Vernal Pools/Fairy Shrimp. No construction shall occur around vernal pools during the rainy season or when the ground is still wet. Construction may be done near vernal pools in the rainy season if the project biologist determines that adequate protective measures have been implemented to prevent runoff into the pools. Verify known vernal pool sites with EMD, Point Of Contact: Mr. Dave Boyer at (858) 577-1125, e-mail david.a.boyer@usmc.mil, or general reception at (858) 577-1108.

Ensure that project activities do not leave rut or depressions that could pond water for more than a few days during the winter rainy season. Such areas could be colonized by vernal pool associated endangered species. Excavations need to be fully backfilled and compacted to not pond. Grading windrows must be smoothed to prevent ponding/damming up water. Ruts must be decompacted and fully backfilled.

3.11.3.3 Migratory Bird Treaty Act. Contractors shall comply with the Migratory Bird Treaty Act (MBTA). If the contractor identifies any bird within the contract area that appears to be building a nest, utilizing a nest, or laying eggs, the Contractor shall immediately notify the Contracting Officer. Most birds typically nest between January and August. Birds can nest in buildings, trees, shrubs, and on the ground. If nesting birds or eggs are encountered, the Contractor shall phase the work to avoid disrupting the birds so the contract can be completed within the stated time schedule and within contract price. The Contractor cannot take action to remove the bird or nest from the areas which is being used. This action shall be conducted or authorized by a qualified federal government employee covered by an appropriate permit.

3.12 MILITARY MUNITIONS

3.12.1 In the event military munitions, as defined in 40 CFR 260, are discovered or uncovered, the Environmental Manager shall immediately stop work in that area, secure the area and prevent employees or other persons from trespassing on, removing, or otherwise disturbing the munitions, and contact the Contracting Officer and Contracting Officer's Representative immediately and await for further instructions.

3.13 TRAINING OF CONTRACTOR AND SUBCONTRACTOR PERSONNEL

3.13.1 The Environmental Manager shall train all personnel and subcontractor personnel involved with task order specific construction operations in all phases of environmental protection and pollution control. Conduct environmental protection and pollution control meetings for all personnel prior to commencing work on contract task order construction operations. Additional meetings shall be conducted for new personnel and when site conditions change. Include in the training and meeting agenda, which includes 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 and pollution control is implemented. Discuss at the meeting the possibility of encountering anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological sites, artifacts, wetlands, and endangered species and their habitat which are known to be in the area.

3.14 POST CONSTRUCTION CLEANUP

3.14.1 The Contractor shall clean up the construction site and adjacent areas in accordance with Contract Clause: "Cleaning Up".

--End of Section --

SECTION 01 62 35

RECYCLED / RECOVERED MATERIALS

07/06

PART 1 GENERAL

1.1 REFERENCES

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

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

40 CFR 247

Comprehensive Procurement Guideline for
Products Containing Recovered Materials

1.2 OBJECTIVES

1.2.1 Government procurement policy to the Contractor is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practicable and consistent with maintaining a satisfactory level of competition without adversely affecting performance requirements or exposing suppliers' employees to undue hazards from the recovered materials. The Environmental Protection Agency (EPA) has designated certain items which must contain a specified percent range of recovered or recycled materials. EPA designated products specified in this contract comply with the stated policy and with the EPA guidelines. The Contractor shall make all reasonable efforts to use recycled and recovered materials in complying with the EPA designated products and otherwise utilizing recycled and recovered materials in the execution of the work under this contract.

1.2.2 The Contractor shall develop and implement a Recycle Management Program incorporating the recycle policies of each respective Activity into the program.

1.3 EPA DESIGNATED ITEMS INCORPORATED IN THE WORK

1.3.1 Various sections of the specifications contain requirements for materials that have been designated by EPA as being products which are or can be made with recovered or recycled materials. These items, when incorporated into the work under this contract, shall contain at least the specified percentage of recycled or recovered materials unless adequate justification (non-availability) for non-use is provided. When a designated item is specified as an option to a non-designated item, the designated item requirements apply only if the designated item is used in the work.

1.4 EPA PROPOSED ITEMS INCORPORATED IN THE WORK

1.4.1 Products other than those designated by EPA are still being researched and are being considered for future Comprehensive Procurement Guideline (CPG) designation. It is recommended that these items, when incorporated in the work under this contract, contain the highest practicable percentage of recycled or recovered materials, provided specified requirements

are also met. Visit <http://www.epa.gov/epawaste/consERVE/tools/cpg/index.htm> to view the CPG requirements, products and recovered materials.

1.5 EPA LISTED ITEMS USED IN CONDUCT OF THE WORK, BUT NOT INCORPORATED IN THE WORK

1.5.1 There are many products listed in 40 CFR 247 which have been designated or proposed by EPA to include recycled or recovered materials that may be used by the Contractor in performing the work, but will not be incorporated into the work. These products include office products, temporary traffic control products, and pallets. It is recommended that these and other non-construction products, when used in the conduct of the work, contain the highest practicable percentage of recycled or recovered materials and that these products be recycled when no longer needed.

1.6 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Recycle Management Plan: For Metals, Glass, Plastic, Cardboard, Paper, Batteries, Electronics and Other Recyclables other than Asphalt Concrete (AC) and Portland Compendious Concrete (PCC), contract specific; GA, KO, PO
- Recycle Manager; GA, KO, PO

1.7 RECYCLABLE MANAGEMENT PLAN

1.7.1 Submit a Recyclable Management Plan for review and approval of the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after award of this contract. The plan shall demonstrate how the contract recyclable diversion goal will be met and shall include the following:

1. Name of individual on the Contractor's staff responsible for recyclable management.
2. Description of the specific approaches to be used in recycling and reuse of the various materials generated, including the on-site temporary storage areas and processing and sorting methods.
3. Name and address of the recycling centers to be used. Submit the name, location, and phone number, including a copy of the permit or license for each facility.

1.7.2 Approval of the Contractor's plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting contract cumulative recyclable management requirement.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION 01 74 19

CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

01/07

PART 1 GENERAL

1.1 SUMMARY

1.1.1 The Contractor shall manage the production and accumulation of construction and demolition waste that are produced as a direct result of the construction operations performed under this contract, to include handling, temporary storage, disposal.

1.2 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM E 1609

(2001) Development and Implementation
of a Pollution Prevention Program

1.3 GOVERNMENT POLICY

1.3.1 Government policy is to apply sound environmental principles in the implementation of a Construction and Demolition and Waste Management Program. The Contractor shall develop and implement a Construction and Demolition and Waste Management Program in accordance with ASTM E 1609 and in accordance with the respective Activity's waste management policies. As part of the program, the Contractor shall: (1) practice efficient waste management when sizing, cutting, and installing products and materials and (2) use all reasonable means to divert construction and demolition waste from landfills and to facilitate their recycling or reuse.

1.4 MANAGEMENT

1.4.1 The Contractor shall take a pro-active role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the recycling effort. The Environmental Manager shall be responsible for training personnel and ensuring their compliance with the approved Construction and Demolition and Waste Management Program. Construction and demolition waste includes excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process, but not incorporated into the work.

1.5 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA"

designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

- Construction and Demolition and Waste Management Program, contract specific; GA, KO, PO

1.6 CONSTRUCTION AND DEMOLITION AND WASTE MANAGEMENT PROGRAM

1.6.1 Submit a Construction and Demolition and Waste Management Program for review and approval of the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of this contract. The plan shall demonstrate how the Contractor's waste diversion goal will be met and shall include the following:

1. Name of individual on the Contractor's staff responsible for waste management.
2. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
3. Documentation, to include minutes, of the regularly scheduled meetings held that address waste management.
4. Description of the specific approaches to be used to manage waste material, including designated on site temporary storage areas, processing methods, and the process for separating of recyclables and reuse materials from waste.
5. Characterization, including estimated types and quantities, of the waste to be generated.
6. Name and address of the off Activity landfill to be used. The Contractor is not allowed to use either one of the Marine Corps Base Camp Pendleton's landfills.
7. Identification of materials that cannot be recycled and reused with an explanation of why they do not qualify as a recyclable or reuse material.

1.6.2 Approval of Contractor's program will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting contract cumulative waste diversion requirement.

1.7 RECORDS

1.7.1 Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through recycling and reuse, and the quantity of waste disposed of at approved landfill of as submitted by the Contractor. Quantities shall be measured by weight. List each type of waste separately, noting the disposal or diversion date. Identify the landfill, waste processor, or other organization used to process or receive the solid waste. Submit a Monthly Waste Tracking Report to the Contracting Officer's Representative and the FSC Technical Writer at the end of each month and prior to invoicing.

1.8 COLLECTION

1.8.1 Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in a manner that maximizes recyclability and salvagability of the identified materials. The Contractor shall provide roll-off containers or dumpsters at the project site when construction waste, rubbish, debris and recyclable materials are going to be produced. Stage the roll-off containers and dumpsters in accordance with the approved Laydown/Staging Site Drawing. Locate the containers and dumpsters out of the way of construction traffic. Provide adequate space for pick-up and delivery. All containers, e.g. roll-off's, dumpsters, and trash cans shall have lids. Lids shall be closed or secured when not in use and at the end of the shift. Containers and dumpster staging areas shall be kept neat and clean at all times. Do not allow rubbish, debris, or other materials to accumulate around containers or anywhere on the project site.

1.8.2 Source Separated Method: Waste products and materials that are recyclable shall be separated from construction waste, trash, and rubbish and sorted as described below into appropriately marked separate containers or containment areas and then transported to a recycle center for further processing. Deliver recyclable materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process. Separate materials into the following category types as appropriate to the project waste and to the available recycling and reuse programs in the project area:

- a. Vegetation debris.
- b. Concrete and masonry.
- c. Metal (e.g. banding, piping, rebar, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, lead brass, bronze).
 - i. Ferrous.
 - ii. Non-ferrous.
- d. Wood (nails and staples allowed).
- e. Debris.
- f. Glass (colored glass allowed).
- g. Paper.
 - i. Bond.
 - ii. Newsprint.
 - iii. Cardboard and paper packaging materials.
- i. Plastic.
 - i. Type 1: Polyethylene Terephthalate (PET, PETE).
 - ii. Type 2: High Density Polyethylene (HDPE).

- iii. Type 3: Vinyl (Polyvinyl Chloride or PVC).
 - iv. Type 4: Low Density Polyethylene (LDPE).
 - v. Type 5: Polypropylene (PP).
 - vi. Type 6: Polystyrene (PS).
 - vii. Type 7: Other. Use of this code indicates that the package in question is made with a resin other than the six listed above, or is made of more than one resin listed above, and used in a multi-layer combination.
- j. Gypsum.
 - k. Non-hazardous paint and paint cans.
 - l. Beverage containers.

1.9.2 Comingled Method: Waste products and recyclable materials shall not be comingled.

1.10 DISPOSAL

1.10.1 The Contractor shall dispose of all construction waste, rubbish, debris and recyclables off of the premises of the Activities.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION 01 78 00

CLOSEOUT SUBMITTALS

05/09

PART 1 GENERAL

1.1 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM E 1971	(2005) Stewardship for the Cleaning of Commercial and Institutional Buildings
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GREEN SEAL (GS)

GS-37	(2000; R 2005) Industrial and Institutional Cleaners
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U.S. ARMY CORPS OF ENGINEERS (USACE)

TR-06-X	(2006; R 3.0) Architectural, Engineering, and Construction (A/E/C) CADD Standard
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1.2 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals; task order specific

- As-Built Record of Equipment and Materials; GA, KO, PO
- Warranty Management Plan; GA, KO, PO
- Warranty Tags; GA, KO, PO
- Preventative Maintenance Plan; GA, KO, PO
- Operations and Maintenance Manuals, task order and project specific; GA, KO, PO

- As-Built Record Drawings when specified in a task order; GA, KO, PO

1.3 RECORD DRAWINGS

1.3.1 Drawings showing final as-built conditions of the project. The terms "drawings," "contract drawings," "drawing files," "working record drawings" and "final record drawings" refer to contract drawings which are revised to be used for final record drawings showing as-built conditions. The final as-built record drawings shall be submitted on CD in pdf format. Submit three CD's with the complete set of as-built record drawings to the Contracting Officer's Representative. The Contracting Officer's will distribute the CD's to the appropriate Government offices.

1.3.1.1 Working Record and Final Record Drawings: Revise the working drawings by using the red-line process to show the as-built conditions during the phases of the project. Keep the working as-built marked drawings current on a weekly basis and at keep at least one set available on the jobsite at all times. Changes from the approved plans which are made during construction operations or additional information which might be uncovered in the course of construction operations shall be accurately and neatly recorded as they occur by means of details and notes. Changes to the plans shall be approved by the Contracting Officer. Prepare final record (as-built) drawings after the completion of each definable feature of work. The working as-built marked prints and final record as-built drawings will be jointly reviewed for accuracy and completeness by the Contracting Officer and the Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the working and final record drawings as specified herein, the Contracting Officer will deduct from the Contractor's final invoice an amount representing the estimated cost of maintaining the record drawings. This deduction will remain until an agreement can be reached between the Contracting Officer and the Contractor regarding the accuracy and completeness of updated drawings. Show on the working and final record drawings, but not limited to, the following information:

- a. The actual location, kinds and sizes of all sub-surface utility lines. In order that the location of these lines and appurtenances may be determined in the event the surface openings or indicators become covered over or obscured, show by offset dimensions to two permanently fixed surface features at the end of each run including each change in direction on the record drawings. Locate valves, splice boxes and similar appurtenances by dimensioning along the utility run from a reference point. Also record the average depth below the surface of each run.
- b. The location and dimensions of any changes within the building structure.
- c. Correct grade, elevations, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.
- d. Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
- e. The topography, invert elevations and grades of drainage installed or affected as part of the construction operations.
- f. Changes or modifications upon approval of the Contracting Officer.

- g. Where contract drawings or specifications present options, show only the option selected for construction on the final as-built prints.
- h. Systems designed or enhanced by the Contractor, such as HVAC controls, fire alarm, fire sprinkler, and irrigation systems.
- i. Modifications and compliance with the following procedures:
 - (1) Follow directions in the modification for posting descriptive changes.
 - (2) Place a Modification Circle at the location of each deletion.
 - (3) For new details or sections which are added to a drawing, place a Modification Circle by the detail or section title.
 - (4) For minor changes, place a Modification Circle by the area changed on the drawing location.
 - (5) For major changes to a drawing, place a Modification Circle by the title of the affected plan, section, or detail at each location.
 - (6) For changes to schedules or drawings, place a Modification Circle either by the schedule heading or by the change in the schedule.
 - (7) The Modification Circle size shall be sized appropriately to clearly mark out and identify the change.

1.3.1.2 Drawing Preparation: Modify the record drawings as may be necessary to correctly show the features of the project as it has been constructed by bringing the approved original set into agreement with approved working as-built prints, and adding such additional drawings as may be necessary. These working as-built marked drawings shall be neat, legible and accurate. The drawings will become part of the permanent records of the task order and shall be submitted to the Contracting Officer's Representative upon completion of the task order and in accordance with Section 01 33 00, Submittal Procedures. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.3.1.3 Payment: The Contractor will be compensated for providing Record Shop Drawings using the line items found in R.S. Means Cost Data book, Division 01, Section 01 11 31.10, "Architectural Fees." The Contractor is to understand that the line items are negotiable depending on size and complexity of the construction project. The negotiated line items will be the line items with "minimum" and maximum."

1.3.2 As-Built Record of Equipment and Materials: Furnish one hard copy with the complete record of equipment and materials used on the project to the Contracting Officer's Representative within 15-calendar days prior to scheduling the "Final Acceptance Inspection." This preliminary submittal will be reviewed complete record of equipment and materials will returned to the Contractor within five (5)calendar days before the scheduled "Final Acceptance Inspection" with Government comments. When the submittal has been approved, submit on three CD's of the complete record of equipment and materials to the Contractor's representative within five calendar

days after the “Final Acceptance Inspections.” Key the designations to the related area depicted on the record shop drawings. List the following data:

RECORD OF DESIGNATED EQUIPMENT AND MATERIALS DATA				
Description	Specification Section	Manufacturer and Catalog, Model, and Serial Number	Composition and Size	Where Used

1.3.3 Submit final approved task order as-built shop drawings within five calendar days after the “Final Acceptance Inspection.”

1.3.4 Construction Contract Specifications: Submit final record (as-built) construction task order specifications, including modifications thereto, within five calendar days after the “Final Acceptance Inspection.”.

1.3.5 Real Property Equipment: Submit a list of installed equipment furnished under task order. Submit the list to the Contracting Officer’s Representative within five calendar days after the “Final Acceptance Inspection.” Include all information usually listed on manufacturer's nomenclature plate. In the "EQUIPMENT-IN-PLACE LIST" include, as applicable, the following for each piece of equipment installed:

- a. Description of item, location (by room number, as applicable), model number, serial number, capacity, name and address of manufacturer, name and address of equipment supplier, condition, spare parts list, manufacturer's catalog, and warranty.

1.4 PREVENTATIVE MAINTENANCE

1.4.1 Submit a Preventative Maintenance (PM) Plan, applicable to equipment and systems that require preventive maintenance to ensure their life expectancy is not compromised, to the Contracting Officer’s Representative within five calendar days after the “Final Acceptance Inspection.”

1.4.1.1 The PM Plan shall include a PM checklist, scheduled PM frequencies, an equipment conditions report, and types of materials/products, to include material/product data that requires PM. The PM Plan shall include information to the operators on how to perform operational checks of the equipment and systems, troubleshoot, make repairs 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.

1.5 WARRANTY MANAGEMENT

1.5.1 Submit a Warranty Management Plan which contains information relevant to FAR Clause 52.246-21 I Warranty of Construction. Submit the Warranty Management Plan to the Contracting Officer and Contracting Officer’s Representative with 15-calendar days after award of the contract. Submit three copies 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 Warranty Management Plan shall 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 shall include due date and whether item has been submitted or was accomplished.

1.5.1.1 Task Order Specific: Assemble approved warranty information on CD (three copies) and submit them to the Contracting Officer's Representative within five calendar days after the "Final Acceptance Inspection." The warranty period will begin on the date of "Final Acceptance Inspection" and continue for the full product warranty period. The Contractor shall provide and honor the manufacturer's most favorable warranty. The Contractor shall provide a one-year workmanship warranty. The Contractor shall schedule and conduct a joint four month and nine month warranty inspection with the Contracting Officer's Representative. Include within the Warranty Management Plan, but not limit the Warranty Management Plan 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 shall 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 Contractor's plans for attendance at the four and nine 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.

1.5.2 Contractor's Response to Construction Warranty Service Requirements: Following oral or written notification by the Contracting Officer or designated Government authority, respond to

construction warranty service requirements within the three categories of priorities listed below. The Construction Warranty Service Priority List is provided below. Submit a report on any warranty item that has been repaired during the warranty period. Include within the report the cause of the problem, date reported, corrective action taken, and when the repair was completed. If the Contractor does not perform the construction warranty within specified category time frames, the Government will document the incident as a failure to address warranty services on the Government's performance evaluation of the Contractor.

- a. First Priority Code 1. Perform onsite inspection to evaluate situation beginning at the time of notification, and determine course of action within 4-hours, initiate work within 6-hours and work continuously to completion or relief.
- b. Second Priority Code 2: Perform onsite inspection to evaluate situation beginning at the time of notification, and determine course of action within 8 hours, initiate work within 24-hours and work continuously to completion or relief.
- c. Third Priority Code 3: All other work to be initiated beginning at the time of notification, within three work days and work continuously to completion or relief.

1.5.2.1 The "Construction Warranty Service Priority List" is as follows:

Code 1-Life Safety Systems

- (1) Fire suppression systems.
- (2) Fire alarm system(s) in place in the building.

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detector

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

- (1) Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

Code 1-Heat

- (1) Area power failure affecting heat.
- (2) Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

Code 3 -Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

- (1) No water to facility.

Code 2-Water (Hot)

- (1) No hot water in portion of building listed.

Code 3-All other work not listed above.

1.5.3 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 three record copies of the warranty tags showing the layout and design. The date of acceptance and the QC signature shall remain blank until the project is accepted. Show the following information on the tag:

WARRANTY TAG	
Type of	

product/material	
Model number	
Serial number	
Contract number	
Warranty period from/to	
QCM's signature	
Prime Contractor's Name	
Subcontractor's Name	
Address	
Telephone number	
Warranty Policy	
Warranty response time priority code	
WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.	

1.6 COMMISSIONING

1.6.1 HVAC Commissioning: All HVAC systems shall be fully commissioned, to include operational checks, verifying Direct Digital Controls work as intended, temperature controls operate as intended, temperature controls are correctly set in accordance with the Base Energy Control Plan, and the system id balanced in accordance with the submitted specifications and plans.

1.7 OPERATION AND MAINTENANCE MANUALS

1.7.1 Operation and Maintenance (O&M) Manuals shall be consistent with the manufacturer's standard brochures, schematics, printed instructions, general operating procedures, and safety precautions. Test data shall be legible and of good quality. Submit three copies of the O&M manuals to the Contracting Officer's Representative in pdf format and on CD within five-calendar days after the "Final Acceptance Inspection." Caution and warning indications shall be clearly highlighted.

1.8 CLEANUP

1.8.1 Provide final cleaning in accordance with ASTM E 1971. Remove waste and surplus materials, rubbish and construction facilities from the site. Recycle, salvage, and return construction and demolition waste from project in accordance with the Recycle Management Plan. Promptly and legally dispose of trash and debris at one of the Base landfills or at an approved landfill off Base. Do not burn, bury, or otherwise dispose of trash on the project site.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

-- End of Section --

SECTION 01 78 23

OPERATION AND MAINTENANCE DATA

07/06

PART 1 GENERAL

1.1 REFERENCES

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

ASTM INTERNATIONAL (ASTM)

ASTM E 1971

(2005) Stewardship for the Cleaning of Commercial and Institutional Buildings

1.2 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-11 Closeout Submittals; task order specific

- Operations and Maintenance Manual, task order specific; GA, KO, PO

1.3 SUBMISSION OF OPERATION AND MAINTENANCE DATA

1.3.1 Submit Operation and Maintenance (O&M) data, to include manuals, for installed equipment and systems as specified in a task order, to include a complete and concise depiction of the installed equipment and system. The data and manuals shall put and emphasis on stressing and enhancing the importance of system interactions, troubleshooting, and long-term preventative maintenance and operation. The QCM shall ensure that the subcontractor's submittal package is complete. Organize and present information in sufficient detail to clearly explain O&M requirements of the system, equipment, component, and subassembly levels. Include an index preceding each submittal.. The QCM shall submit the data and manuals Contracting Officer's Representative for review and approval prior to scheduling and providing training of Government personnel.

1.3.2 Package Quality: All documents shall be fully legible. Poor quality copies and material with hole punches obliterating the text or drawings will not be accepted.

1.3.3 Package Content: Data package content shall be as shown in the paragraph titled "Schedule of Operation and Maintenance Data Packages." The data package shall address each product, component, and system designated for data package submission.

1.3.4 Changes to Submittals: Manufacturer-originated changes or revisions to submitted data shall be furnished by the Contractor if a component of an item is so affected subsequent to acceptance of the O&M Data. Changes, additions, or revisions required by the Contracting Officer for final acceptance of submitted data, shall be submitted by the Contractor within five (5) calendar days of the notification of this change requirement.

1.3.5 Review and Approval: The Contractor's QCM shall review the commissioned systems and equipment submittals for completeness and applicability. The QCM shall verify that the systems and equipment provided meet the requirements of the approved Task Order Plan/Work Plan, approved submittals, plans documents and the design intent, particularly as they relate to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local environmental impacts. The QCM, on behalf of the subcontractor, shall communicate deficiencies and system defects to the Contracting Officer and Contracting Officer's Representative. Upon a successful review of the corrections, the QCM shall submit the O&M data and manuals to the Contracting Officer and Contracting Officer's Representative within five calendar days after the "Final Acceptance Inspection."

1.3.6 O&M Data and Manuals: Based on the O&M data and manuals, the Contractor shall develop a Preventive Maintenance (PM) Plan, to include periodic inspections, PM and PM checklists, derived from the O&M manuals which will be used by the Government to start a Preventive Maintenance Program. The Contractor shall submit the PM Plan to the Contracting Officer and Contracting Officer's Representative within five calendar days after the "Final Acceptance Inspection."

1.4 TYPES OF INFORMATION REQUIRED FOR O&M DATA

1.4.1 Operating Instructions: Include specific instructions, procedures, and illustrations for the following phases of operation for the installed model and features of each system:

1.4.1.1 Safety Precautions: List personnel hazards and equipment or product safety precautions for all operating conditions.

1.4.1.2 Operator Prestart: Include procedures required to install, set up, and prepare each system for use.

1.4.1.3 Startup, Shutdown, and Post-Shutdown Procedures: Provide narrative description for Startup, Shutdown and Post-shutdown operating procedures including the control sequence for each procedure.

1.4.1.4 Normal Operations: Provide narrative description of Normal Operating Procedures. Include Control Diagrams with data to explain operation and control of systems and specific equipment.

1.4.1.5 Emergency Operations: Include 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. Include Emergency Shutdown Instructions for fire, explosion, spills, or other foreseeable contingencies. Provide guidance and procedures for emergency

operation of all utility systems including required valve positions, valve locations and zones or portions of systems controlled.

1.4.1.6 Operator Service Requirements: Include instructions for services to be performed by the operator such as lubrication, adjustment, inspection, and recording gage readings.

1.4.1.7 Environmental Conditions: Include 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 equipment should not be allowed to run.

1.4.2 Preventive Maintenance: Include the following information for preventive and scheduled maintenance to minimize corrective maintenance and repair for the installed model and features of each system. Include potential environmental and indoor air quality impacts of recommended maintenance procedures and materials.

1.4.2.1 Lubrication Data: Include preventative maintenance lubrication data, in addition to instructions for lubrication provided under paragraph titled "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.
- c. A Lubrication Schedule showing service interval frequency.

1.4.2.2 Preventive Maintenance Plan and Schedule: Include manufacturer's schedule for routine preventive maintenance, inspections, tests and adjustments required to ensure proper and economical operation and to minimize corrective maintenance. Provide 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.

1.4.2.3 Cleaning Recommendations: Provide environmentally preferable cleaning recommendations in accordance with ASTM E 1971.

1.4.3 Corrective Maintenance (Repair): Include 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.

1.4.3.1 Troubleshooting Guides and Diagnostic Techniques: Include 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 requires replacement.

1.4.3.2 Wiring Diagrams and Control Diagrams: Wiring diagrams and control diagrams shall be 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.

1.4.3.3 Maintenance and Repair Procedures: Include instructions and a list of tools required to repair or restore the product or equipment to proper condition or operating standards.

1.4.3.4 Removal and Replacement Instructions: Include step-by-step procedures and a list required tools and supplies for removal, replacement, disassembly, and assembly of components, assemblies, subassemblies, accessories, and attachments. Provide tolerances, dimensions, settings and adjustments required. Instructions shall include a combination of text and illustrations.

1.4.3.5 Spare Parts and Supply Lists: Include lists of spare parts and supplies required for maintenance and 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 typically have a long lead-time to obtain.

1.4.4 Corrective Maintenance Work-Hours: Include manufacturer's projection of corrective maintenance work-hours including requirements by type of craft. Corrective maintenance that requires completion or participation of the equipment manufacturer shall be identified and tabulated separately.

1.4.5 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:

1.4.5.1 Product Submittal Data: Provide a copy of all SD-03 Product Data submittals required in the applicable technical sections.

1.4.5.2 Manufacturer's Instructions: Provide a copy of all SD-08 Manufacturer's Instructions submittals required in the applicable technical sections.

1.4.5.3 O&M Submittal Data: Provide a copy of all SD-10 Operation and Maintenance Data submittals required in the applicable technical sections.

1.4.5.4 Parts Identification: Provide identification and coverage for all 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 shall show the index, reference, or key number that will cross-reference the illustrated part to the listed part. Parts shown in the listings shall be grouped 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

1.4.5.5 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 components such as the compressor of air conditioning system.

1.4.5.6 Personnel Training Requirements: Provide information available from the manufacturers that are needed for use in training designated personnel to properly operate and maintain the equipment and systems.

1.4.5.7 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.

1.4.5.8 Testing and Performance Data: Include completed prefunctional checklists, functional performance test forms, and monitoring reports. Include recommended schedule for retesting and blank test forms.

1.4.5.9 Contractor Information: Provide a list that includes the name, address, and telephone number of the Contractor personnel and each subcontractor who installed the product or equipment, or system. For each item, also provide the name address and telephone number of the manufacturer's 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.

PART 2 PRODUCTS

Not Used

PART 3 EXECUTION

Not Used

-- End of Section --

SECTION 02 82 16

ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Abatement of Asbestos Containing Materials (ACM), to include flooring, mastics, window putty, thermal pipe insulation, flexible duct connectors, and transite.

1.1.2 Follow all Federal, Great State of California, and San Diego Air Pollution Control District, the respective Activity's, and other local regulations and laws as they pertain ACM abatement procedures.

1.1.2.1 The Contractor shall notify and San Diego Air Pollution Control District before any abatement, complete all necessary forms, and bear the cost of all associated fees.

1.1.2.2 Manifesting of Hazardous Waste: All hazardous ACM waste shall be manifested through each Activity's Environmental Security Office in accordance with the Activity's regulations and guidelines.

1.1.2.2.1 Marine Corps Air Station Miramar Hazmat Generator ID: All Hazardous Wastes/Hazardous Material leaving MCAS Miramar must be manifested through the MCAS Miramar Environmental Management Department (EMD) Waste Management Division, and be assigned a MCAS Miramar Generator Number. Notify EMD a minimum of one week prior to manifesting HAZWASTE/HAZMAT off station. All HAZWASTE/HAZMAT must be inspected by EMD at Bldg. 6317 (northwest end) just prior to leaving the station. EMD Point Of Contact: Mr. P. Mike Corona, e-mail: paul.corona@usmc.mil, or general reception at (858) 577-1108. Preprinted copy of manifest must be delivered to EMD POC for review, via electronic mail, at least 24 hours in advance of requested delivery date. Additionally, HAZWASTE/HAZMAT must not be stored on station more than 60 calendar days from its initial removal/containerizing

1.1.2.3 The Contractor shall dispose of all ACM at an approved State or Federal regulated disposal site. The Contractor shall bare all associated packaging and transportation costs, and all associated disposal fees.

1.2 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2

Fundamentals Governing the
Design and Operation of Local
Exhaust Systems

ANSI Z88.2

Respiratory Protection

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 732

Aging Effects of Artificial
Weathering on Latex Sealants

ASTM D 522

Mandrel Bend Test of Attached
Organic Coatings

ASTM D 1331

Surface and Interfacial Tension of
Solutions of Surface-Active
Agents

ASTM D 2794

Resistance of Organic Coatings to
the Effects of Rapid Deformation
(Impact)

ASTM E 84

(1995; Rev. B) Surface Burning
Characteristics of Building
Materials

ASTM E 96

Water Vapor Transmission of
Materials

ASTM E 119

Fire Tests of Building
Construction and Materials

ASTM E 736

Cohesion/Adhesion of Sprayed
Fire-Resistive Materials Applied
to Structural Members

ASTM E 1368

Visual Inspection of Asbestos
Abatement Projects

ASTM E 1494

Encapsulants for Spray or Trowel
Applied Friable Asbestos-
Containing Building Materials

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1926.21

Safety Training and Education

29 CFR 1926.51

Sanitation

29 CFR 1926.33

Access to Employee Exposure
and Medical Records

29 CFR 1926.59

Hazard Communications

29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
29 CFR 1926.200	Accident Prevention Signs and Tags
29 CFR 1926.1101	Asbestos, Tremolite, Anthophyllite, Actinolite
40 CFR 61-SUBPART A	General Provisions
40 CFR 61-SUBPART M	National Emission Standard for Asbestos
40 CFR 260	Hazardous Waste Management Systems
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
40 CFR 270	EPA Administered Permit Programs: The Hazardous Waste Permit Program
40 CFR 272	Approved State Hazardous Waste Management Programs
40 CFR 763	Asbestos Containing Material in Schools
49 CFR 172	Hazardous Materials, Tables, and Hazardous Materials Communication Regulations

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024

Guidance for Controlling
Asbestos Containing Materials in
Buildings**UNDERWRITERS LABORATORIES INC. (UL)**

UL 586

(1990) High-Efficiency,
Particulate, Air Filter Units**1.3 DEFINITIONS****1.3.1 ACM: ASBESTOS CONTAINING MATERIALS.**

1.3.2 Aggressive Method: Removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles, or disintegrates intact ACM.

1.3.3 Amended Water: Water containing a wetting agent or surfactant with a maximum surface tension of 29 dynes per centimeter when tested in accordance with ASTM D 1331.

1.3.4 Area Sampling: Sampling of asbestos fiber concentrations that approximates the concentrations of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.

1.3.5 Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite asbestos, anthophyllite asbestos, and actinolite asbestos and any of these minerals that has been chemically treated or altered. Materials are considered to contain asbestos if the asbestos content of the material is determined to be at least one percent.

1.3.6 Asbestos Control Area: The area where asbestos removal operations are performed that is isolated by physical boundaries that assists in the prevention of the uncontrolled release of asbestos dust, fibers, or debris.

1.3.7 Asbestos Fibers: Those fibers having an aspect ratio of at least 3:1 and longer than 5 micrometers as determined by National Institute for Occupational Safety and Health (NIOSH) Method 7400.

1.3.8 Asbestos Permissible Exposure Limit: 0.1 fibers per cubic centimeter of air as an 8-hour time weighted average measured in the breathing zone as defined by 29 CFR 1926.1101.

1.3.9 Background: The ambient airborne asbestos concentration in an uncontaminated area as measured prior to any asbestos hazard abatement efforts. Background concentrations for other (contaminated) areas are measured in similar but asbestos free locations.

1.3.10 Certified Industrial Hygienist (CIH): One certified in the practice of industrial hygiene by the American Board of Industrial Hygiene.

1.3.11 Class I Asbestos Work: Activities involving the removal of TSI and surfacing ACM and PACM.

1.3.12 Class II Asbestos Work: Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

1.3.13 Class III Asbestos Work: Repair and maintenance operations, where "ACM", including TSI and surfacing ACM and PACM, is likely to be disturbed.

1.3.14 Class IV Asbestos Work: Maintenance and custodial activities during which employees contact but do not disturb ACM or PACM and activities to clean up dust, waste and debris resulting from Class I, II, and III activities.

1.3.15 Clean Room: An uncontaminated room having facilities for the storage of employees' street clothing and uncontaminated materials and equipment.

1.3.16 Competent Person: In addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f): in addition, for Class I and Class II work who is specially trained in a training course which meets the criteria of EPA's Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class III and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92 (a)(2). The Competent Person shall receive training and certification by a State of California accredited training institution.

1.3.17 Critical Barrier: One or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

1.3.18 Decontamination Area: An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for the decontamination of workers, materials, and equipment that are contaminated with asbestos.

1.3.19 Disturbance: Activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

1.3.20 Employee Exposure: Employee exposure means that exposure to airborne asbestos that would occur if the employee were not using respiratory protective equipment.

1.3.21 Encapsulation: The abatement of an asbestos hazard through the appropriate use of chemical encapsulants.

1.3.21 Encapsulants: Specific materials in various forms used to chemically or physically entrap asbestos fibers in various configurations to prevent these fibers from becoming airborne. There are

four types of encapsulants as follows that shall comply with performance requirements as specified herein.

1.3.21.1 Removal Encapsulant (can be used as a wetting agent).

1.3.21.2 Bridging Encapsulant (used to provide a tough, durable surface coating to asbestos containing material).

1.3.21.3 Penetrating Encapsulant (used to penetrate the asbestos containing material encapsulating all asbestos fibers and preventing fiber release due to routine mechanical damage).

1.3.21.4 Lock-Down Encapsulant (used to seal off or "lock-down" minute asbestos fibers left on surfaces from which asbestos containing material has been removed).

1.3.22 Equipment Room (Change Room): A contaminated room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

1.3.23 Fiber: A particulate form of asbestos, 5 micrometers or longer, with a length-to-diameter ratio of at least 3 to 1.

1.3.24 Friable Asbestos Material: One percent asbestos containing material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.

1.3.25 Glovebag: Not more than a 60 x 60 inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

1.3.26 HEPA Filter Equipment: High efficiency particulate air (HEPA) filtered vacuum and/or exhaust ventilation equipment with a filter system capable of collecting and retaining asbestos fibers. Filters shall retain 99.97 percent of particles 0.3 microns or larger as indicated in UL 586.

1.3.27 High-Efficiency Particulate Air (HEPA) Filter: A filter capable of trapping and retaining at least 99.97 percent of all mono-dispersed particles of 0.3 micrometers in diameter.

1.3.28 Homogeneous Area: An area of surfacing material or thermal system insulation that is uniform in color and texture.

1.3.29 Industrial Hygienist: A professional qualified by education, training, and experience to anticipate, recognize, evaluate and develop controls for occupational health hazards.

1.3.30 Intact: ACM that has not been crumbled, pulverized, or otherwise deteriorated so that the asbestos is no longer likely to be bound with its matrix.

1.3.31 Negative Initial Exposure Assessment: A demonstration by the abatement contractor that their abatement worker's exposure during an operation is expected to be consistently below the PELs.

1.3.32 Negative Pressure Enclosure (NPE): That engineering control technique described as a negative pressure enclosure in 29 CFR 1926.1101.

1.3.33 Non-Friable Asbestos Material: Material that contains asbestos in which the fibers have been immobilized by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not normally release asbestos fibers during any appropriate use, handling, storage or transportation. It is understood that asbestos fibers may be released under other conditions such as demolition, removal, or mishap.

1.3.34 PACM: Presumed asbestos containing material.

1.3.35 PEL: Permissible Exposure Limits.

1.3.36 Personal Sampling: Air sampling that is performed to determine asbestos fiber concentrations within the breathing zone of a specific employee, as performed in accordance with 29 CFR 1926.1101.

1.3.37 Presumed Asbestos Containing Material (PCAM): Thermal system insulation and surfacing material found in buildings constructed no later than 1980.

1.3.38 Private Qualified Person (PQP): Registered Architects, Professional Engineers, Asbestos Project Designers, Certified Industrial Hygienists (CIH), or consultants who have successfully completed training and is therefore accredited under a legitimate State of California Model Accreditation Plan as described in 40 CFR 763 as a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer; and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The PQP shall be qualified to perform visual inspections as indicated in ASTM E 1368. The PQP shall be licensed in the State of California.

1.3.39 Project Designer means a person who has successfully completed the training requirements for an Abatement Project Designer established by 40 U.S.C. Sec. 763.90(g).

1.3.40 Regulated Area: An area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit.

1.3.41 Removal: All operations where ACM and PACM is taken out or stripped from structures or substrates, and includes demolition operations.

1.3.42 TEM: Transmission Electron Microscopy.

1.3.43 Time-Weighted Average Limit (TWA): The abatement contractor shall ensure that no abatement worker is exposed to an airborne concentration of asbestos in excess of 0.1 fiber per cubic centimeter of air as an eight (8) hour time-weighted average (TWA).

1.3.44 Wetting Agent: A chemical added to water to reduce the water's surface tension thereby increasing the water's ability to soak into the material to which it is applied. An equivalent wetting agent shall have a surface tension of at most 29 dynes per centimeter when tested in accordance with ASTM D 1331.

1.4 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES. All task order submittals shall be submitted to the Contracting Officer and COR within 15-calendar days after award of a task order and shall be site specific. Mobilization and work shall not begin until the submittals have been approved by the Contracting Officer.

SD-01 Pre-Abatement Submittals:

- Asbestos Abatement Plan; GA, KO, PO
- A copy of the San Diego Air Pollution Control District permit; GA, KO, PO
- Respiratory Protection Program; GA, KO, PO
- As applicable, Rental Equipment vendor; GA, KO, PO
- A copy of the California State Contractor's License for the Contractor performing ACM abatement; GA, KO, PO
- A copy of the California State Licensed Contractor's Asbestos Certification (ASB); GA, KO, PO
- Hazardous Waste Disposal Site, include name, address, point of contact, phone and email address; GA, KO, PO

SD-02 Shop Drawings

- Floor Plan, as part of the Asbestos Abatement Plan, for each building or space scheduled for asbestos abatement, including the location of decontamination chambers and shower and staging areas; GA, KO, PO

SD-03 Product Data: As part of the Asbestos Abatement Plan:

- HEPA Filter; Contracting Officer, GA, KO, PO
- HEPA Vacuum; GA, KO, PO
- Respirators; GA, KO, PO
- Decontamination Units; Contracting Officer, GA, KO, PO
- Shower Unit; GA, KO, PO
- 6 mil Polyethylene Sheet; GA, KO, PO

- Clear 6 Mil Poly Disposable Bags Printed With Asbestos Warning; GA, KO, PO
- Glovebag; GA, KO, PO

SD-06 Test Reports; Prior to abatement:

- Submit Base Line sample results to the Contracting Officer and COR one day before ACM abatement or demolition work starts; GA, KO, PO
- Submit Daily Periodic Personal Air Monitoring Sampling Results as part of the Contractor's Daily Production Report; GA, KO, PO
- Submit Daily Direct Work Area Air Monitoring Sampling Results as part of the Contractor's Daily Production Report GA, KO, PO

SD-07 Certificates and Accreditations: As part of the Asbestos Abatement Plan submit current/up to date training certifications and accreditations:

- Asbestos Competent Person/Supervisor; GA, KO, PO
- Testing Laboratory Qualifications; GA, KO, PO
- Third Party (Industrial Hygienist) Qualifications; GA, KO, PO
- Asbestos Project Designer; GA, KO, PO
- Asbestos Abatement Worker, Training Certificates; GA, KO, PO
- Medical Examinations for the Asbestos Abatement Worker and Asbestos Competent Person/Supervisor; GA, KO, PO
- Hazardous Waste Hauler/Transporter; GA, KO, PO
- Hazardous Waste Acceptance Site; GA, KO, PO

SD-08 Manufacture's Instruction

- Encapsulants; GA, KO, PO
- Wetting Agent; GA, KO, PO
- Cleaning/Cutting Chemicals; ; GA, KO, PO
- Material Safety Data Sheets (MSDS) for all products; GA, KO, PO

SD-11 Closeout Submittal; Submit to the Contracting Officer and Contracting Officer's Representative within five (5) calendar days after the completion of the "Final Acceptance Inspection":

- Post Abatement Air Clearance PCM or TEM Sample Results; TEM samples shall be indicated in each task order's statement of work; GA, KO, PO
- Copy of Hazardous Waste Manifest; GA, KO, PO
- Waste Shipment Record; GA, KO, PO

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Store ACM waste in approved hazardous waste containers.

1.5.2 Label hazardous waste containers.

1.5.3 Remove hazardous waste containers from the respective Activity's premises within five (5) working days after the completion of the "Final Acceptance Inspection."

1.5.4 Generate the ACM waste manifest through the respective Activity's Environmental Security Office.

1.6 QUALITY ASSURANCE

1.6.1 Site Specific Asbestos Abatement Plan: For each scheduled abatement, submit an Asbestos Abatement Plan detailing the safety precautions, such as lockout, tagout, tryout, fall protection, and confined space entry procedures and equipment and work procedures, to be used in the abatement of ACM. The plan shall be developed and signed by the approved Asbestos Project Designer. The Asbestos Abatement Plan shall include, and is not limited to, the precise personal protective equipment to be used including, but not limited to, respiratory protection, type of whole-body protection and if reusable coveralls are to be employed decontamination methods (operations and quality control plan), a floor plan drawing showing the location of asbestos control areas including clean and dirty areas, buffer zones, decontamination chambers, showers, storage areas, change rooms, removal method(s), interface of trades involved in the with other types of work, sequencing of asbestos related work, disposal plan, type of wetting agent and asbestos encapsulant to be used, locations of local exhaust equipment, planned air monitoring strategies, and a detailed description of the method to be employed in order to control environmental pollution. The Asbestos Abatement Plan shall also include (both fire and medical emergency) response plans. Each Site Specific Asbestos Abatement Plan shall be submitted to and approved by the Contracting Officer prior to mobilization and starting of asbestos abatement work. The Contractor, Asbestos Control Supervisor, Competent Person, Asbestos Project Designer and CIH shall meet with the Contracting Officer, Contracting Officer's Representative and the respective Activity's Safety Officer prior to beginning work, to discuss in detail the Asbestos Abatement Plan, including work procedures and safety precautions. The Contractor is not authorized to make any changes to the approved Asbestos Abatement Plan without the approval of the Contracting Officer.

1.6.2 Accredited Certified Industrial (CIH): As part of the Asbestos Abatement Plan, submit the name, address, and telephone number of the independent CIH selected to perform air sampling, analysis, and reporting of airborne concentrations of asbestos fibers along with evidence that the CIH selected holds the appropriate State of California license, permits and certifications and is American Industrial Hygiene Association (AIHA), National Institute of Science and Technology (NIST) under National Voluntary Laboratory Accreditation Program (NVLAP) accredited. The CIH shall be an independent firm with no affiliations to the abatement contractor.

1.6.3 Accredited Laboratory: As part of the Asbestos Abatement Plan, submit the name, address, and telephone number of the accredited laboratory selected to perform sampling, analysis, and reporting of airborne concentrations of asbestos fibers along with evidence that the laboratory selected holds the appropriate State of California license, permits and certification and that the laboratory is American Industrial Hygiene Association (AIHA) accredited and that persons counting the samples have been judged proficient by current inclusion on the AIHA Asbestos Analysis Registry (AAR) and successful participation of the laboratory in the Proficiency Analytical Testing (PAT) Program. Where analysis to determine asbestos content in bulk materials or transmission electron microscopy is required, submit evidence that the laboratory is accredited by the National Institute of Science and Technology (NIST) under National Voluntary Laboratory Accreditation Program (NVLAP) for asbestos analysis.

1.6.4 Asbestos Project Designer (APD): As part of the Asbestos Abatement Plan, submit the name, address, and telephone number of the APD, selected to prepare the Asbestos Abatement Plan and perform monitoring, and documentation that the APD has successfully completed training and is accredited and where required and certified as a Building Inspector, Contractor/Supervisor Abatement Worker, and Asbestos Project Designer as described by 40 CFR 763 and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The APD shall be appropriately certified by a State of California accredited training institution.

1.6.5 Hazardous Waste Facility or Approved Landfill Approval: As part of the Asbestos Abatement Plan, submit documentation that the hazardous waste disposal facility is approved for ACM disposal in accordance with the USEPA, state and other regulatory agency(s).

1.6.6 Asbestos Worker and Asbestos Competent Person/Supervisor Training: As part of the Asbestos Abatement Plan, submit current certificates for each Asbestos Worker and Asbestos Competent Person/Supervisor indicating that the Asbestos Worker and Asbestos Competent Person/Supervisor has received training in the proper handling of materials and wastes that contain asbestos in accordance with 40 CFR 763; understands the health implications and risks involved, including the illnesses possible from exposure to airborne asbestos fibers; understands the use and limits of the respiratory equipment to be used; and understands the results of monitoring of airborne quantities of asbestos as related to health and respiratory equipment as indicated in 29 CFR 1926.1101 on an initial and annual basis. Certificates shall be organized by individual worker and supervisor, not grouped by type of certification. A portfolio of compliance for all Asbestos Workers and Asbestos Competent Person/Supervisor working within the controlled area of abatement shall be maintained and be open for verification at the project site.

1.6.7 Medical Certification: As part of the Asbestos Abatement Plan, submit a current certification for each Asbestos Worker and Asbestos Competent Person/Supervisor, signed by a licensed physician indicating that the worker and supervisor has met or exceeded all of the medical prerequisites listed herein and in 29 CFR 1926.1101 and 29 CFR 1926.103 as prescribed by law. Submit certificates prior to the start of work. Post evidence of compliance with the training requirements of 40 CFR 763 at the project site.

1.6.8 Respiratory Protection Program: As part of the Asbestos Abatement Plan, submit a program manual or operating procedure including methods of compliance with regulatory statutes. Submit a current fit test certification for each Asbestos Worker and the Asbestos Competent Person/Supervisor prior to start of abatement work. Post evidence of compliance with the training requirements of 40 CFR 763 at the project site.

1.6.9 Air Sampling Results: In accordance with the approved Asbestos Abatement Plan, the independent CIH or CIH's qualified technician shall perform the sampling and fiber counting. The CIH shall keep a record of the results at the project site as evidence of compliance while work is in progress. A portfolio of all of the air sampling and fiber counting reports shall be submitted as a "Closeout" submittal within five (5) calendar days after the "Final Acceptance Inspection." The reports shall be submitted to the Contracting Officer, COR, FSC Safety Officer in chronological order on CD.

1.6.9.1 Notify the Contracting Officer and COR immediately of any airborne levels of asbestos fibers in excess of the acceptable limits. Submit sampling results to the Contracting Officer and COR and the affected contractor employees within 3-working days, signed by the CIH performing air sampling and the CIH or the CIH's technician that analyzed the sample. The Contractor shall notify the Contracting Officer and COR immediately of any variance in the pressure differential which could cause adjacent unsealed areas to have asbestos fiber concentrations in excess of 0.01 fibers per cubic centimeter or background whichever is higher. In no circumstance shall levels exceed 0.1 fibers per cubic centimeter.

1.6.10 Pressure Differential Recordings for Local Exhaust System: In accordance with the approved Asbestos Abatement Plan, provide a local exhaust system that creates a negative pressure of at least 0.02 inches of water relative to the pressure external to the enclosure and operate it continuously, 24-hours a day, until the critical barriers for the asbestos control area are removed. The Asbestos Competent Person/Supervisor shall keep a record of the results at the project site as evidence of compliance while work is in progress.. A portfolio of all of the Pressure Differential reports shall be submitted as a "Closeout" submittal within five (5) calendar days after the "Final Acceptance Inspection." The reports shall be submitted to the Contracting Officer and COR, and FSC Safety Officer in chronological order on CD.

1.6.11 Notifications: Obtain the necessary permit from the San Diego Air Pollution Control District prior to performing asbestos abatement. The Contractor is responsible for all costs incurred to process and obtain permits.

1.6.12 Rental Equipment: As part of the Asbestos Abatement Plan and when applicable, submit a copy of the written notification to the rental company concerning the intended use of the rented equipment and the possibility of asbestos contamination of the rented equipment.

1.6.13 Respirator Program Records: As part of the Asbestos Abatement Plan, submit records of the respirator program as required by ANSI Z88.2, 29 CFR 1926.103, and 29 CFR 1926.1101.

1.7 REQUIREMENTS

1.7.1 The Contractor shall perform ACM abatement, ensuring that all surfaces are cleaned, certifying that all surfaces are free from ACM and that air clearance results indicate that the building or space is safe to occupy before removing the critical barriers, decontamination chambers and shower. The Contractor shall bare all costs, to include Liquidated Damages, to remedy deficient work.

1.7.2 Medical Requirements: Maintain medical surveillance and medical record keeping as listed in 29 CFR 1926.1101.

1.7.3 Medical Examinations: Before exposure to airborne asbestos fibers, provide Asbestos Workers with a comprehensive medical examination in accordance with 29 CFR 1926.1101 and

CalOSHA regulations. This requirement shall be current and shall have been satisfied prior to the start of any asbestos abatement work. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving asbestos and within 30-calendar days before or after the termination of employment in such occupation. Specifically identify x-ray films of asbestos workers to the consulting radiologist and mark medical record jackets with the word "ASBESTOS."

1.7.4 Medical Records: Maintain complete and accurate records of employees' medical examinations, medical records, and exposure data for a period of 50-years after termination of employment and make records of the required medical examinations and exposure data available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health (OSHA), or authorized representatives of them, and an employee's physician upon the request of the employee or former employee.

1.7.5 Training: Train all personnel involved in the asbestos control work in accordance with United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) and State of California training criteria. The Contractor shall document the training by providing: dates of training, training entity, course outline, names of instructors, and qualifications of instructors upon request by the Contracting Officer. Furnish each employee with respirator training and fit testing administered by the qualified fit testing technician as required by 29 CFR 1926.1101. Fully cover engineering and other hazard control techniques and procedures.

1.7.6 Permits, Licenses, and Notifications: Obtain necessary permits and licenses for the abatement, encapsulation, transporting, and disposal of non-regulated and regulated ACM, and furnish notification of such actions required by Federal, State of California, San Diego Air Pollution Control District, other states, and local authorities prior to the start of work. Notify the Regional Office of the United States Environmental Protection Agency (USEPA), and the San Diego Air Pollution Control District a within 10- working days prior to commencement of work in accordance with 40 CFR 61-SUBPART M.

1.7.7 Environment, Safety and Health Compliance: In addition to detailed requirements of this specification, comply with those applicable laws, ordinances, criteria, rules, and regulations of the Federal, State of California, other states, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with the applicable requirements of the current issue of 29 CFR 1926.1101, 40 CFR 61-SUBPART A, 40 CFR 61-SUBPART M, and ND OPNAVINST 5100.23. Submit matters of interpretation of standards to the Contracting Officer for resolution before starting the work. The Contracting Officer will contact the appropriate administrative agency for resolution. Where the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement will apply as defined by the Contracting Officer. The following laws, ordinances, criteria, rules and regulations regarding removal, handling, storing, transporting and disposing of asbestos materials apply:

1.7.7.1 California Administrative Code, TITLE 8, ARTICLE 2.5; Registration Asbestos related work.

1.7.7.2 California Code of Regulations, TITLE 8, SECTION 5208; General Safety Orders Asbestos.

1.7.7.3 California Business and Professions Code, SECTION 7058.5

1.7.8 Respiratory Protection Program: Establish and implement a respirator program as required by ANSI Z88.2, 29 CFR 1926.1101, and 29 CFR 1926.103. Submit a written description of the program to the Contracting Officer.

1.7.9 Asbestos Competent Person/Supervisor: The Contractor shall be represented by an On Site Asbestos Competent Person/Supervisor, trained using the model the State of California accreditation plan which meets the Federal statutes for all portions of the herein listed work.

1.7.10 Hazard Communication: Adhere to all parts of 29 CFR 1926.59. As part of the Asbestos Abatement Plan, submit Material Safety Data Sheets (MSDS) for all materials brought to the site.

PART 2 PRODUCTS

2.1 THE PRODUCTS BELOW SHALL MEET THE DESCRIBED SPECIFICATIONS:

2.1.1 Encapsulants: The Contractor shall only use encapsulants that conform to current USEPA requirements and shall not contain any toxic or hazardous substances as defined in 29 CFR 1926.59.

2.1.2 Cutting Agents: The Contractor shall use non-hazardous cutting agents that are environmentally friendly.

2.1.3 Polyethylene: 6 mil transparent polyethylene.

PART 3 EXECUTION

3.1 PERSONAL PROTECTIVE EQUIPMENT

3.1.1 Provide the COR with at least two complete sets of personal protective equipment (PPE) as required for entry to and for inspection of the asbestos control area. provide equivalent training to the COR that has been provided to the Contractor's employees in regards to the use of the required personal protective equipment, with the exception of respirator training.

3.1.2 Respirators: Provide respirators for Asbestos Workers that are performing asbestos abatement work and for other Contractor personnel requiring entry into a controlled area. The respirators shall be approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. Do not provide Government personnel with respirators.

3.1.3 Exterior Whole Body Protection: Provide Asbestos Workers engaged with asbestos abatement operations with disposable "non-breathable" whole body outer protective clothing, head coverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by the use of tape. Reusable whole body outer protective clothing shall be either disposed of as asbestos contaminated waste upon exiting from the asbestos regulated work area or be properly decontaminated.

3.1.4 Personal Decontamination Unit: Provide a temporary, negative pressure unit with a separate decontamination locker room and clean locker room with a shower that complies with 29 CFR 1926.51(f)(4)(ii) through (V) in between for personnel required to wear whole body protective

clothing. Provide two separate lockers for each asbestos worker, one in each locker room. Keep street clothing and street shoes in the clean locker. HEPA vacuum and remove asbestos contaminated disposable protective clothing while still wearing respirators at the boundary of the asbestos work area and seal in impermeable bags or containers for disposal. HEPA vacuum and remove asbestos contaminated reusable protective clothing while still wearing respirators at the boundary of the asbestos work area, seal in two impermeable bags, label outer bag as asbestos contaminated waste, and transport for decontamination. Do not wear work clothing between home and work. Locate showers between the decontamination locker room and the clean locker room and require that all employees shower before changing into street clothes. Collect used shower water and filter with approved water filtration equipment to remove asbestos contamination. Dispose of filters and residue as asbestos waste. Discharge clean water to the sanitary system. Dispose of asbestos contaminated work clothing as asbestos contaminated waste or properly decontaminate as specified in the Contractor's Asbestos Hazard Abatement Plan. Decontamination units shall be physically attached to the asbestos control area. Build both a personnel decontamination unit and an equipment decontamination unit onto and integral with each asbestos control area.

3.1.5 Eye Protection: Provide goggles to Asbestos Workers engaged in asbestos abatement operations when the use of a full face respirator is not required.

3.1.6 Warning Signs and Labels: Provide warning signs printed in English at all approaches to asbestos control areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all asbestos materials, scrap, waste, debris, and other products contaminated with asbestos.

3.1.6.1 Warning Sign: Provide vertical format conforming to 29 CFR 1926.200, and 29 CFR 1926.1101 minimum 20-inches by 14- inches displaying the following legend in the lower panel:

<u>Legend</u>	<u>Notation</u>
Danger	one inch Sans Serif Gothic or Block
Asbestos	one inch Sans Serif Gothic or Block
Cancer and Lung Disease Hazard	1/4 inch Sans Serif Gothic or Block
Authorized Personnel Only	1/4 inch Gothic
Respirators and Protective Clothing are Required in this Area	1/4 inch Gothic

Spacing between lines shall be at least equal to the height of the upper of any two lines.

3.1.6.2 Warning Labels: Provide labels conforming to 29 CFR 1926.1101 of sufficient size to be clearly legible, displaying the following legend:

DANGER

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST

CANCER AND LUNG DISEASE HAZARD

**BREATHING ASBESTOS DUST MAY
CAUSE SERIOUS BODILY HARM**

3.1.7 Local Exhaust System: Provide a local exhaust system in the asbestos control area in accordance with ANSI Z9.2 and 29 CFR 1926.1101 that will provide at least four air changes per hour inside of the negative pressure enclosure. Local exhaust equipment shall be operated 24-hours per day, until the asbestos control area is removed and shall be leak proof to the filter and equipped with HEPA filters. Maintain a minimum pressure differential in the control area of minus 0.02-inches of water column relative to adjacent, unsealed areas. Provide continuous 24-hour per day monitoring of the pressure differential with a pressure differential automatic recording instrument. In no case shall the building ventilation system be used as the local exhaust system for the asbestos control area. Filters on exhaust equipment shall conform to ANSI Z9.2 and UL 586. The local exhaust system shall terminate out of doors and remote from any public access or ventilation system intakes.

3.1.8 Tools: Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to ANSI Z9.2 and UL 586. Do not use power tools to remove asbestos containing materials unless the tool is equipped with effective, integral HEPA filtered exhaust ventilation systems. Remove all residual asbestos from reusable tools prior to storage or reuse.

3.2 WORK PROCEDURES

3.2.1 perform asbestos abatement work in accordance with 29 CFR 1926.1101, 40 CFR 61-subpart m, and CalOSHA regulations. Use EPA approved removal procedures and techniques. personnel shall wear and utilize PPE and equipment as specified herein. Eating, smoking, drinking, chewing gum, tobacco, or applying cosmetics shall not be permitted in the asbestos work or control areas. Personnel of other trades not engaged in the removal and demolition of asbestos containing material shall not be exposed at any time to airborne concentrations of asbestos unless all the personnel protection and training provisions of this specification are complied with by the trade personnel. Seal all penetrations prior to commencement of asbestos work. submit an outage request to FMD and have the building heating, ventilating, and air conditioning system(s) shutdown. seal off the HVAC supply and return openings to the system(s), prior to the commencement of asbestos work. De-energize electrical service when wet removal is performed and provide temporary electrical service with verifiable ground fault circuit interrupter (GFCI) protection prior to the use of any water. If an asbestos fiber release or spill occurs outside of the asbestos control area, the asbestos competent person/supervisor shall stop work immediately, the contractor shall notify the Contracting Officer or COR immediately. The Contractor shall go into consultation with their Asbestos Project Designer and CIH, and develop a plan of action in accordance with Federal and State of California regulations to correct the condition to the satisfaction of the Contracting Officer including clearance sampling, prior to resumption of work. Corrective work shall be performed at no additional cost to the Government.

3.2.2 Protection of Existing Work to Remain: Perform work without damage or contamination of adjacent work. Where such work is damaged or contaminated, as indicated by the Contracting Officer using visual inspection or sample analysis, it shall be restored to its original condition or

decontaminated by the Contractor at no additional cost to the Government. This includes inadvertent spillage of dirt, dust, or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, stop work and notify the Contracting Officer and COR immediately. The Contractor shall revise the approved Asbestos Abatement Plan, set up controls to contain the ACM, monitor, perform air sampling in the area and clean up the spillage at no additional cost to the Government.

3.2.3 Furnishings and Equipment: Cover and seal furnishings and equipment that will remain in place during asbestos abatement operations with 6-mil plastic sheet. As indicated in a task order statement of work, remove furnishings and equipment from the work area and store in a location on site as indicated in the approved Asbestos Abatement Plan. At the conclusion of the asbestos removal work and cleanup operations, move the furnishings and equipment to the area from which they came, to include all work associated with and reinstallation.

3.2.4 Base Line Sampling: In accordance with the approved Asbestos Abatement Plan, perform base line sampling of the interior and exterior of the facility or space(s) for asbestos fibers. Submit the sampling results to the Contracting Officer and COR as part of the Contractor's Daily Production Report.

3.2.5 Asbestos Control Area Requirements

3.2.5.1 Negative Pressure Enclosure: Block and seal openings in areas where the release of airborne asbestos fibers can be expected. Establish an asbestos negative pressure enclosure with the use of curtains, portable partitions, or other enclosures in order to prevent the escape of asbestos fibers from the contaminated asbestos work area. Negative pressure enclosure development shall include protective covering of uncontaminated walls, and ceilings with a continuous membrane of two layers of minimum 6-mil plastic sheet sealed with tape to prevent water or other damage. Provide two layers of 6-mil plastic sheet over floors and extend a minimum of 12-inches up walls. Seal all joints with tape. Provide clear vision windows for outside monitoring. Provide local exhaust system in the asbestos control area. Openings will be allowed in enclosures of asbestos control areas for Asbestos Workers and equipment entry and exit, the supply and exhaust of air for the local exhaust system and the removal of properly containerized asbestos containing materials. Replace local exhaust system filters as required to maintain the efficiency of the system.

3.2.5.2 Glovebag: When the construction of a negative pressure enclosure is infeasible for the removal of asbestos. Use alternate techniques as indicated in 29 CFR 1926.1101. Establish designated limits for the asbestos regulated area with the use of rope or other continuous barriers, and maintain all other requirements for asbestos control areas. The CHI or CIH's technician shall conduct personal samples of each worker engaged in asbestos handling (removal, disposal, transport and other associated work) throughout the duration asbestos abatement operations. If the quantity of airborne asbestos fibers monitored at the breathing zone of the Asbestos Workers at any time exceeds background or 0.01 fibers per cubic centimeter whichever is greater, stop work, evacuate personnel in adjacent areas. Notify the Contracting Officer and COR immediately and wait for direction. Upon request by the Contracting Officer and at no additional cost to the Government the Contractor shall immediately perform air sampling for asbestos fibers. If adjacent areas are contaminated as determined by the air samples, the Contractor shall revise the approved Asbestos Abatement Plan, set up controls to contain the ACM, monitor, perform air sampling in the area and clean up the contaminated space at no additional cost to the Government.

3.3 REMOVAL PROCEDURES

3.3.1 Wet asbestos material with a fine spray of amended water during removal, cutting, or other handling so as to reduce the emission of airborne fibers. Remove material and immediately place in double bagged 6 mil plastic asbestos disposal bags. Remove asbestos containing material in a gradual manner, with continuous application of the amended water or wetting agent in such a manner that no asbestos material is disturbed prior to being adequately wetted. As part of the Asbestos Abatement Plan, where unusual circumstances prohibit the use of 6 mil plastic bags, develop an alternate proposal for containment of the ACM. For example, in the case where both piping and insulation are to be removed, the Contractor may elect to wet the insulation, wrap the pipes and insulation in plastic and remove the pipe by sections. Handle asbestos containing material as indicated in 40 CFR 61-SUBPART M.

3.4 AIR SAMPLING

3.4.1 Sampling of airborne concentrations of asbestos fibers shall be performed in accordance with 29 CFR 1926.1101 and CalOSHA. Sampling shall be performed by the independent CIH. Unless otherwise specified, use NIOSH Method 7400 for sampling and analysis.

3.5 SAMPLING PRIOR TO ASBESTOS WORK

3.5.1 The CIH shall perform area air sampling and establish the baseline one day prior to installation of asbestos controls as set for on the approved Asbestos Abatement Plan. Establish the background by performing area sampling in similar but uncontaminated places inside the facility and outside of the facility.

3.6 SAMPLING DURING ASBESTOS WORK

3.6.1 The CIH shall perform personal and area sampling as indicated in 29 CFR 1926.1101 and CalOSHA regulations. In addition, provided the same type of work is being performed, provide area sampling at least once every work shift close to the work inside the enclosure, outside the clean room entrance to the enclosure, and at the exhaust opening of the local exhaust system. If sampling outside the enclosure shows airborne levels have exceeded background or 0.01 fibers per cubic centimeter, whichever is greater, stop all work, correct the condition(s) causing the increase, and notify the Contracting Officer immediately.

3.7 SAMPLING AFTER FINAL CLEAN-UP (CLEARANCE SAMPLING)

3.7.1 The CIH shall perform area sampling of asbestos fibers using aggressive air sampling techniques as defined in the EPA 560/5-85-024 and establish an airborne asbestos concentration of less than 0.01 fibers per cubic centimeter after final clean-up but before removal of the enclosure or the asbestos work control area. After final cleanup and the asbestos control area is dry, but prior to clearance sampling, the CIH and Asbestos Competent Person/Supervisor shall perform a visual inspection in accordance with ASTM E 1368 to ensure that the asbestos control and work area is free of any accumulations of dirt, dust, or debris. The Contractor shall prepare a written report signed and dated by the CIH documenting the asbestos controlled area is free of airborne asbestos fibers. The Contractor shall prepare a written report signed and dated by the Asbestos Competent Person/Supervisor documenting that the asbestos control area is free of dust, dirt, and debris and all waste has been removed. Submit the documentation to the Contracting Officer and COR, and FSC Safety Officer within five (5) calendar days after the "Final Acceptance Inspection."

3.8.1.1 For ACM abatement other than abatement for demolition projects: The CIH shall submit samples to an accredited laboratory for Transmission Electron Microscopy (TEM) analyzation. Take a minimum of three samples per space for TEM analysis. The asbestos fiber counts from these samples shall be less than 0.01 fibers per cubic centimeter or be not greater than the background, whichever is greater. Should any of the final samples indicate a higher value, the Contractor shall take appropriate actions to re-clean the area and shall repeat the sampling and TEM analysis at no additional cost to the Government.

3.8.1.2 For ACM abatement projects where the building or facilities will be demolished: The CIH shall perform Phase Contrast Microscopy (PCM) air sampling. Results are reported as fibers per cubic centimeter and depend on the volume of air sampled. PCM analysis is not asbestos fiber specific and will count all fibers meeting the methods criteria for fiber determination.

3.9 LOCK-DOWN

3.9.1 Prior to removal of plastic barriers and after pre-clearance cleanup of ACM, the CIH and Asbestos Competent Person/Supervisor shall conduct a visual inspection of all areas affected by the removal in accordance with ASTM E 1368. In accordance with the approved Asbestos Abatement Plan, apply an encapsulant on the ceiling, walls, floors and other areas exposed in the removal area. The CIH and Asbestos Competent Person/Supervisor shall inspect the areas for any visible fibers, and to ensure that encapsulant was applied evenly and appropriately. The Contractor shall re-apply the encapsulant over deficient areas at no cost to the Government.

3.10 SITE INSPECTION

3.10.1 While performing asbestos engineering control work, the Contractor shall be subject to on-site inspection by the Contracting Officer and COR who may be assisted by or represented by safety or industrial hygiene personnel. If the work is found to be in violation of this specification, the Contracting Officer and COR will issue a stop work order to be in effect immediately and until the violation is resolved. All related costs including standby time required to resolve the violation shall be at the Contractor's expense.

PART 4 CLEAN-UP AND DISPOSAL

4.1 HOUSEKEEPING

4.1.1 Essential parts of asbestos engineering controls is housekeeping and clean-up procedures. Maintain surfaces of the asbestos engineered control area free of accumulations of asbestos fibers. Give meticulous attention to restricting the spread of dust and debris; keep waste from being distributed over the general area. Use HEPA filtered vacuum cleaners. **DO NOT BLOW DOWN THE SPACE WITH COMPRESSED AIR.** When asbestos abatement is complete and all asbestos waste is removed from the work-site and final clean-up is completed and before removal of the critical barriers and negative air equipment, the CIH and Asbestos Competent Person/Supervisor shall visually inspect all surfaces within the enclosure for residual material or accumulated dust or debris. The Contractor shall re-clean all areas showing dust or residual materials. If re-cleaning is required, perform cleaning, air and clearance sampling to acceptable results and at no additional cost to the Government.

4.2 TITLE TO MATERIALS

4.2.1 All hazardous waste materials shall be disposed of in accordance with all Federal, state, the respective Activity’s and other government agency regulations.

4.3 DISPOSAL OF ASBESTOS

4.3.1 Procedure for Disposal: Collect asbestos waste, asbestos contaminated water, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing which may produce airborne concentrations of asbestos fibers and place in sealed fiber-proof, waterproof, non-returnable containers (e.g. double plastic 6-mil poly bags, cartons, drums or cans). Wastes within the containers shall be adequately wet in accordance with 40 CFR 61-SUBPART M. Affix a warning and Department of Transportation (DOT) label to each container including the bags or use at least 6-mil poly bags with the approved warnings and DOT labeling preprinted on the bag. The name of the waste generator and the location at which the waste was generated shall be clearly indicated on the outside of each container. Prevent contamination of the transport vehicle (especially if the transport vehicle is a rented truck likely to be used in the future for non-asbestos purposes). These precautions include lining the vehicle cargo area with plastic sheeting (similar to work area enclosure) and thorough cleaning of the cargo area after transport and unloading of asbestos debris is complete. Dispose of waste asbestos material at an approved asbestos disposal facility or landfill. For temporary storage, store sealed impermeable bags in containers or in waste drums labeled as containing ACM. The containers or waste drums shall be staged in accordance with the approved Asbestos Abatement Plan. Procedure for hauling and disposal shall comply with 40 CFR 61-SUBPART M, state, regional, and local standards.

4.3.2 Asbestos Disposal Quantity Report: The Contractor shall record and submit, as part of the Contractor’s Daily Production Report, the amount of asbestos containing material removed and released for disposal for each day of work. The report shall provide the amounts of material removed during the previous day work in either linear feet or square feet

4.3.3 The Contractor shall provide closeout submittals on CD to the Contracting Officer and COR within three (3) calendar days of the “Final Acceptance Inspection.”

APPENDIX A

ASBESTOS CONTAINING MATERIALS

Note: The following list does not include every product/material that may contain asbestos. It is intended as a general guide to show which types of materials may contain asbestos.

Acoustical Plaster	Fire Curtains
Adhesives	Fire Door
Asphalt Floor Tile	Fireproofing Materials
Base Flashing	Flooring Backing
Blown-in Insulation	Heating and Electrical Ducts
Boiler Insulation	High Temperature Gaskets
Breaching Insulation	HVAC Duct Insulation
Caulking/Putties	HVAC Flexible Duct Connectors
Ceiling Tiles and Lay-in Panels	Joint Compounds
Cement Pipes	Laboratory Hoods/Table Tops
Cement Siding	Packing Materials (for wall/floor penetrations)
Cement Wallboard	Pipe Insulation (corrugated air-cell, block, etc.)

Chalkboards	Roofing Shingles
Construction Mastics (floor tile, carpet, ceiling tile, etc.)	Spackling Compounds
Cooling Towers	Spray-Applied Insulation
Decorative Plaster	Taping Compounds (thermal)
Ductwork Flexible Fabric Connections	Textured Paints/Coatings
Electric Wiring Insulation	Thermal Paper Products
Electrical Cloth	Vermiculite Insulation (Zonolite)
Electrical Panel Partitions	Vinyl Floor Tile
Elevator Brake Shoes	Vinyl Sheet Flooring
Elevator Equipment Panels	Vinyl Wall Coverings
Fire Blankets	Wallboard

What kind of building materials may contain asbestos:

Product	Location	% of Asbestos	Dates of Use	Binder	Friable Nonfriable	How Fibers Can Be Released
ROOFING AND SIDING						
Roofing Felts	Flat, Built Up Roofs	10 - 15	1910 - Present	Asphalt	Nonfriable	Replacing, Repairing, Demolishing
Roof Felt Shingles	Roofs	1	1971 - 1974	Asphalt	Friable	Replacing, Demolishing
Roofing Shingles	Roofs	20 - 32	? - Present	Portland Cement	Nonfriable	Replacing, Repairing, Demolishing
Roofing Tiles	Roofs	20 - 30	1930 - Present	Portland Cement	Nonfriable	Replacing, Repairing, Demolishing
Siding Shingles	Siding	12 - 14	? - Present	Portland Cement	Nonfriable	Replacing, Repairing, Demolishing
Clapboards	Siding	12 - 15	1944 - 1945	Portland Cement		Replacing, Repairing, Demolishing
WALLS AND CEILINGS						
Sprayed Coating	Ceilings, Walls, and Steelwork	1 - 95	1935 - 1978	Portland Cement, Sodium Silicate, Organic Binders	Friable	Water Damage, Deterioration Impact
Troweled Coating	Ceilings, Walls	1 - 95	1936 - 1978	Portland Cement, Sodium Silicate	Friable	Water Damage, Deterioration Impact
Asbestos Cement Sheet	Near Heat sources such as Fireplaces,	20 - 50	1930 - Present	Portland Cement	Nonfriable	Cutting, Sanding, Scraping

	Boilers					
Spackle	Walls, Ceilings	3 - 5	1930 - 1978	Starch, Casein, Synthetic Resins	Friable	Cutting, Sanding, Scraping
Joint Compound	Walls, Ceilings	3 - 5	1945 - 1977	Asphalt	Friable	Cutting, Sanding, Scraping
Textured Paints	Walls, Ceilings	4 - 15	? - 1978		Friable	Cutting, Sanding, Scraping
Millboard, Rollboard	Walls, Commercial Buildings	80 - 85	1925 - ?	Starch, Lime, Clay	Friable	Cutting, Demolition
Vinyl Wallpaper	Walls	6 - 8	?		Nonfriable	Removal, Sanding, Dry Scraping, Cutting
Insulation Board	Walls	30	?	Silicates	Friable	Removal, Sanding, Dry Scraping, Cutting
FLOORS						
Vinyl - Asbestos Tile	Floors	21	1950 - 1980?	Poly (vinyl) - Chloride	Nonfriable	Removal, Sanding, Dry Scraping, Cutting
Asphalt - Asbestos Tile	Floors	26 - 33	1920 - 1980?	Asphalt	Nonfriable	Removal, Sanding, Dry Scraping, Cutting
Resilient Sheet Flooring	Floors	30	1950 - 1980?	Dry Oils	Nonfriable	Removal, Sanding, Dry Scraping, Cutting
Mastic Adhesives	Sheet Flooring and Tile Backing	5 - 25	1945 - 1980?	Asphalt	Friable	Removal, Sanding, Dry Scraping, Cutting
PIPES AND BOILERS						
Cement Pipe and Fittings	Water and Sewer Mains	20 - ?	1935 - Present	Portland Cement	Nonfriable	Demolition, Cutting, Removing
Block	Boilers	6 - 15	1890 -	Magnesium	Friable	Damage,

Insulation			1978	Carbonate, Calcium Silicate		Cutting, Deterioration
Preformed Pipe Wrap	Pipes	50	1926 - 1975	Magnesium Carbonate, Calcium Silicate	Friable	Damage, Cutting, Deterioration
Corrugated Asbestos Paper	Pipes, High Temp. Moderate Temp.	90 35 - 70	1935 - 1980? 1910 - 1980?	Sodium Silicate, Starch	Friable	Damage, Cutting, Deterioration
Paper Tape	Furnaces, Steam Valves, Flanges, Electrical Wiring	80	1901 - 1980?	Polymers, Starches, Silicates	Friable	Tearing, Deterioration
Putty (mudding)	Plumbing Joints	20 - 100	1900 - 1973	Clay	Friable	Water Damage, Cutting, Deterioration

Source: United States Environmental Protection Agency.

-- End of Section --

SECTION 02 83 33 13

REMOVAL AND DISPOSAL OF LEAD CONTAINING PAINT

PART 1 GENERAL

1.1 SUMMARY

1.1.1 Abatement of Lead-Based Paint (LBP) to include partial removal of loose and flakey LBP on wood, metal, and concrete surfaces and full chemical removal of LBP on surfaces as specified.

1.1.2 Follow all Federal, Great State of California, and San Diego Air Pollution Control District, the respective Activity's and other local regulations and laws as they pertain ACM abatement procedures.

1.1.2.1 Manifesting of Hazardous Waste: All hazardous waste shall be manifested through each Activity's Environmental Security Office in accordance with the Activity's regulations and guidelines.

1.1.2.1.2 Marine Corps Air Station Miramar Hazmat Generator ID: All Hazardous Wastes/Hazardous Material leaving MCAS Miramar must be manifested through the MCAS Miramar Environmental Management Department (EMD) Waste Management Division, and be assigned a MCAS Miramar Generator Number. Notify EMD a minimum of one week prior to manifesting HAZWASTE/HAZMAT off station. All HAZWASTE/HAZMAT must be inspected by EMD at Bldg. 6317 (northwest end) just prior to leaving the station. EMD Point Of Contact: Mr. P. Mike Corona, e-mail: paul.corona@usmc.mil, or general reception at (858) 577-1108. Preprinted copy of manifest must be delivered to EMD POC for review, via electronic mail, at least 24 hours in advance of requested delivery date. Additionally, HAZWASTE/HAZMAT must not be stored on station more than 60 calendar days from its initial removal/containerizing

1.1.2.2 The Contractor shall dispose of all LBP at an approved State or Federal regulated disposal site. The Contractor shall bare all associated packaging and transportation costs, and all associated disposal fees.

1.2 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2

(2012) Fundamentals Governing
the Design and Operation of Local
Exhaust Systems

ANSI Z88.2

(1992) American National
Standard for Respiratory
Protection

**OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION (OSHA)
CODE OF FEDERAL REGULATIONS (CFR)**

29 CFR 1910.1025	Lead, General Industry
29 CFR 1926.21	Safety Training and Education
29 CFR 1926.51	Sanitation
29 CFR 1926.33	Access to Employee Exposure and Medical Records
29 CFR 1926.55	Gases, Vapors, Fumes, Dusts, and Mists
29 CFR 1926.59	Hazard Communications
29 CFR 1926.62	Lead Exposure in Construction
29 CFR 1926.65	Hazardous Waste Operations and Emergency Response
29 CFR 1926.103	Respiratory Protection
29 CFR 1926.200	Accident Prevention Signs and Tags
40 CFR 260	Hazardous Waste Management Systems
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR 265	Interim Status Standard for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities

40 CFR 268	Land Disposal Restrictions
40 CFR 270	EPA Administered Permit Programs: The Hazardous Waste Permit Program
40 CFR 272	Approved State Hazardous Waste Management Programs
40 CFR 745	Lead Requirements for Lead Based Paint Activities
49 CFR 172	Hazardous Materials, Tables, and Hazardous Materials Communication Regulations
49 CFR 178	Shipping Container Specification

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD Guidelines	(2012) Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing
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UNDERWRITERS LABORATORIES INC. (UL)

UL 586	High-Efficiency Particulate Air Filter Units
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1.3 DEFINITIONS

1.3.1 Action Level: Employee exposure, without the use of a respirator, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8-hour period in an occupational/industrial environment.

1.3.2 Area Sampling: Sampling of lead concentrations within the lead control and inside the physical boundary that is representative of the airborne lead concentrations, but is not collected in the breathing zone of personnel.

1.3.3 Competent Person: As used in this section, refers to a person employed by the contractor who is trained in the recognition and control of lead hazards in accordance with current federal, state, and local regulations. An industrial or safety professional certified for comprehensive practice by the American Board of Industrial Hygiene or by the Board of Certified Safety professionals is best choice.

1.3.4 Contaminated Room: Room for removal of contaminated personal equipment (PPE).

1.3.5 Decontamination Unit: The decontamination unit consists of three independent chambers connected to each, to include a dirty room, shower room, and a clean room.

1.3.6 Eight-Hour Time Weighted Average (TWA): Airborne concentration of lead to which an employee is exposed, averaged over an 8 hour workday as referenced in the 29 CFR 1926.62.

1.3.7 High Efficiency Particulate Air (HEPA) Vacuum: A HEPA filtered vacuum cleaner with a UL 586 filter system capable of collecting and retaining lead-contaminated dust. A high efficiency particulate filter is defined as a filter that is 99.97 percent efficient against 0.03 micron or larger size particulate.

1.3.8 Lead: A soft heavy toxic malleable metallic element; bluish white when freshly cut but tarnishes readily to dull gray.

1.3.9 Lead-Based Paint (LBP): Paint or other surface coatings that contain lead in excess of 1.0 milligram per centimeter squared or 0.5 percent by weight.

1.3.10 Lead-Based Paint Hazard: Any condition that causes exposure to lead from lead contaminated dust, lead contaminated soil, or lead-based paint that is deteriorated or present in accessible surfaces, friction surfaces, or impact surfaces that would result in adverse human health effects.

1.3.11 Lead-Contaminating Paint (LCP): Lead-based paint or other similar surface coatings containing lead or lead compound in excess of 0.06 percent by weight of the total nonvolatile content of paint.

1.3.12 Lead control Area: An enclosed area or structure constructed as a temporary containment equipped with a HEPA filtered local exhaust which prevents the spread of lead, dust, paint chips, or debris existing as a condition of LBP removal operations. The lead control area is also isolated by physical boundaries to prevent unauthorized entry of personnel.

1.3.13 Lead Permissible Exposure Limit (PEL): Is defined as 50 micrograms per cubic meter of air over an 8-hour time weighted average as specified in 29 CFR 1926.62. If an employee is exposed for more than 8-hours in a workday, the PEL shall be determined by the following formula: $PEL \text{ (micrograms/cubic meter of air)} = 400/\text{number of hours worked per day}$.

1.3.14 Personal Sampling: Sampling of airborne lead concentrations within the breathing zone of an employee to determine the 8-hour time weighted average concentration in accordance with 29 CFR 1926.62. Samples shall be considered an area within a hemisphere, forward of the shoulders, with a radius of 6 to 9 inches and centered at the nose or mouth of an employee.

1.3.15 Physical Boundary: An enclosed lead control zone that is cordoned or partitioned off to keep unauthorized personnel from entry. As used in this section, "inside boundary" shall be used synonymous with "outside boundary".

1.4 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the

submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES. All task order submittals shall be submitted to the Contracting Officer and COR within 15-calendar days after award of a task order and shall be site specific. Mobilization and work shall not begin until the submittals have been approved by the Contracting Officer.

SD-01 Pre-Abatement Submittals:

- LBP Abatement Plan, task order, site specific; ; GA, KO, PO
- Respiratory Protection Program; ; GA, KO, PO
- As applicable, Copy of notification to Rental Equipment vendor; ; GA, KO, PO
- A copy of the California State Contractor's License for the Contractor performing LBP abatement; ; GA, KO, PO
- Hazardous Waste Disposal Site, include name, address, point of contact, phone and email address; ; GA, KO, PO

SD-02 Shop Drawings

- Floor Plan for each building or space required to have LBP abatement; ; GA, KO, PO

SD-03 Product Data

- HEPA Vacuum Filter; ; GA, KO, PO
- HEPA Vacuum; ; GA, KO, PO
- Respirators; GA, KO, PO
- Decontamination Units; ; GA, KO, PO
- Shower; ; GA, KO, PO
- Paint Lock; GA, KO, PO
- Encapsulant; ; GA, KO, PO
- 6 mil Polyethylene Sheet; ; GA, KO, PO

SD-06 Test Reports

- Daily Periodic Personal Air Monitoring Sampling Results; ; GA, KO, PO
- Daily Direct Work Area Air Monitoring Sampling Results; ; GA, KO, PO

SD-07 Certificates: Submit current/up to date task order site specific certifications as follows:

- Qualifications of the Competent Person; ; GA, KO, PO
- Testing Laboratory Qualifications; ; GA, KO, PO
- Third Party (Industrial Hygienist) Qualifications; ; GA, KO, PO
- Qualifications and Certifications of the Lead Abatement Worker; ; GA, KO, PO
- Medical Examinations for the Lead Worker and Lead Competent Person; ; GA, KO, PO
- Hazardous Waste Hauler/Transporter; GA, KO, PO
- Hazardous Waste Acceptance Site; GA, KO, PO

SD-08 Manufacture's Instruction

- Encapsulants; ; GA, KO, PO
- Paint Lock; ; GA, KO, PO
- Material Safety Data Sheets (MSDS) for all products; v

SD-11 Closeout Submittal

- Final Air Clearances for the Direct Work Area; ; GA, KO, PO
- Lead-Based Paint Manifest; ; GA, KO, PO

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Store LBP waste in approved hazardous waste containers.

1.5.2 Label hazardous waste containers.

1.5.3 Remove hazardous waste containers from the respective Activity's premises within five (5) working days after the completion of all LBP abatements.

1.5.4 Generate the LBP waste manifest through the respective Activity's Environmental Security Office.

1.6 QUALITY ASSURANCE

1.6.1 Qualifications of the Competent Person: The Contractor is responsible for designating a "Competent Person" at each abatement site. The competent person shall be capable of identifying existing and predictable lead hazards in the surroundings or working conditions, in addition, the Competent Person shall have the authorization to take prompt corrective measures to eliminate such problems. The Competent Person shall make daily make inspections of the job site, materials and

equipment and ensure the project is in compliance with all Federal and State of California regulations and laws. The Competent Person shall be certified as a LBP Supervisor/Project Monitor through an accredited California Department of Public Health accredited training provider.

1.6.2 Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected to perform sampling, testing, and reporting of airborne concentrations of lead and contaminated lead in soil. Use a laboratory accredited under the EPA National Lead Laboratory Accreditation Program (NLLP) by either American Industrial Association for Laboratory Accreditation (AIALA) or the American Industrial Hygiene Association (AIHA) and that is successfully participating in the Environmental Lead Proficiency Analytical Testing (ELPAT) program to perform sample analysis.

1.6.3 Lead-Based Paint (LBP) Removal Plan: Submit a detailed site-specific plan of the work procedures to be used in the removal of LBP. The plan shall include a drawing showing the typical location, size, and details of lead control areas; the location and details of the decontamination units; view ports, and mechanical ventilation systems. Include in the plan eating and drinking, smoking, and sanitary procedures; interface of trades; sequencing of lead related work; collected waste water and paint disposal plan; air sampling plan; respirators and personal protective equipment (PPE); a detailed description of the method of containment of the operation to ensure that airborne lead concentrations of 30 micrograms per cubic meter of air and baseline lead dust/soil concentrations are not reached outside of the lead control area. Include site preparation and clean-up procedures. Include occupational and environmental sampling, training, and strategy, sampling methodology, frequency, duration of sampling, and qualifications of sampling personnel in the air-sampling portion of the plan.

1.6.4 Occupational and Environmental Sampling Results: Submit occupational and environmental sampling results to the Contracting Officer and Contracting Officer's Representative within three (3) working days of collection of LBP, signed by the testing laboratory responsible person, the employee that performed the sampling, and the competent person.

1.6.4.1 The sampling results shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures in accordance with 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead.

1.6.4.2 Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62.

1.6.4.3 The initial monitoring shall determine the requirements for further monitoring and the need to fully implement the control and protective requirements including the compliance program in accordance with 29 CFR 1926.62.

1.6.5 Occupational and Environmental Assessment Data Report: Some LBP removal work may not require full implementation of the requirements of 29 CFR 1926.62. Based on the experience of the Contractor and/or the use of a specific process or method for performing the work, the Contractor may not be able to provide historic data (previous 12 months) to demonstrate that airborne exposures are controlled below the action level. Such methods or controls shall be fully presented in the LBP. To reduce the full implementation of 29 CFR 1926.62, the Contractor shall submit documentation in an Assessment Data Report.

1.6.5.1 Submit an occupational and environmental assessment report to the Contracting Officer prior to the start of work, signed by the testing laboratory responsible person and the competent person.

1.6.5.2 Submit a report that supports the determination regarding the reduction of the need to fully implement the requirements of 29 CFR 1926.62 and the supporting LBP Plan. The exposure assessment shall represent each job classification, or if working conditions are similar to previous jobs by the same employer, provide previously collected exposure data that can be used to estimate worker exposures in accordance with 29 CFR 1926.62. The data shall represent the worker's regular daily exposure to lead for the stated work.

1.6.5.3 Submit worker exposure data conducted during the task based trigger operations of 29 CFR 1926.62 with a complete process description in supporting the negative assessment.

1.6.5.4 The initial assessment shall determine the requirement for further monitoring and the need to fully implement the control and protective requirements including the compliance program LBP Plan in accordance with 29 CFR 1926.62.

1.6.6 Medical Examinations: Initial medical surveillance as required by 29 CFR 1926.62 shall be made available to all employees exposed to lead at any time (1 Day) above the action level. Full medical surveillance shall be made available to all employees on an annual basis who are or may be exposed to lead in excess of the action level for more than 30-calendar days a year or as required by the 29 CFR 1926.62. Adequate records shall show that employees meet the medical surveillance requirements of 29 CFR 1926.33, 29 CFR 1926.62, and 29 CFR 1926.103.

1.6.7 Medical Records: Maintain complete and accurate medical records of employees for a period of at least 30-years or for the duration of employment plus 30-years, whichever is longer.

1.6.8 Medical Surveillance: Provide medical surveillance to all personnel exposed to lead as indicated in 29 CFR 1926.62.

1.6.9 Competent Person (CP) Responsibilities

1.6.9.2 Reviews and approves the LBP Abatement Plan for conformance to the Federal and State of California regulations and laws.

1.6.9.3 Continuously inspects LBP removal work for conformance with the approved LBP Abatement Plan.

1.6.9.4 Performs air and wipe samples.

1.6.9.5 Ensure work is performed in strict accordance with the contract specifications at all times.

1.6.9.6 Controls work to prevent hazardous exposure to human beings, animals, and to the environment at all times.

1.6.9.7 Certify the conditions of the work as called for elsewhere in this specification.

1.6.10 Training: Each Lead Abatement Worker shall be formally trained in LBP removal/abatement, disposal, and air sampling operations prior to the time of initial job assignment

and annually thereafter, in accordance with 29 CFR 1926.21, 29 CFR 1926.62, and Federal EPA and State of California laws and regulations.

1.6.11 Training Certificate: Submit a certificate for each Lead Abatement Worker, signed and dated by an approved EPA accredited training provider stating that the employee has received and passed the required lead training.

1.6.12 Respiratory Protection Program

1.6.12.1 Furnish each employee with a respirator fit test at the time of initial fitting and annually thereafter in accordance with 29 CFR 1926.62.

1.6.12.2 Establish and implement a respiratory protection program as required by ANSI Z88.2, 29 CFR 1926.103, 29 CFR 1926.62, and 29 CFR 1926.55.

1.6.13 Hazardous Waste Management: The Hazardous Waste Management Plan shall comply with applicable requirements of Federal, State of California and other states, and local hazardous waste laws and regulations and address the following:

1.6.13.1 Identification and classification of hazardous wastes associated with the work.

1.6.13.2 Estimated quantities of wastes to be generated and disposed of.

1.6.13.3 Names and qualifications of each Contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and operator and a 24-hour point of contact. Furnish two copies of EPA, State and local hazardous waste permits, manifests, and EPA identification numbers.

1.6.13.4 Names and qualifications (experience and training) of personnel who will be working on site with hazardous wastes.

1.6.13.5 List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.

1.6.13.6 Spill prevention, containment, and clean-up contingency measures including a health and safety plan to be implemented in accordance with 29 CFR 1926.65.

1.6.13.7 Work plan and schedule for waste containment, removal, and disposal. Wastes shall be cleaned up and containerized daily. Container lids shall be secured at all times.

PART 2 PRODUCTS

2.1 THE PRODUCTS BELOW SHALL MEET THE DESCRIBED SPECIFICATIONS:

2.1.1 Encapsulants shall conform to current US EPA requirements, shall contain no toxic or hazardous substances as defined in 29 CFR 1926.59. The encapsulant shall be organic, low odor or odorless, and low VOC. The following requirements shall be met:

2.1.1.1 Certificates of Compliance: The abatement Contractor will submit to the Contracting Officer and COR the test results and certificates from the manufacturer substantiating compliance

with Performance Requirements for encapsulants when installed according to manufacturer recommendations.

- a. Encapsulant, General:
 - i. ASTM E84: Flame Spread of 25, smoke emission of 50.
 - ii. ASTM C732, Accelerated Aging Test: Life Expectancy - 20 years.
 - iii. ASTM E96: Permeability - Minimum of 0.4 perms.
- b. Bridging and Penetrating Encapsulants:
 - i. ASTM E736: Cohesion/Adhesion Test - 50 lbs/ft.
 - ii. ASTM E119: Fire Resistance - 3 hours (Classified by UL for use over fibrous and cementitious sprayed fireproofing).
 - iii. ASTM D2794, Gardner Impact Test: Impact Resistance - Minimum 43 in/lb.
 - iv. ASTM D522, Mandrel Bend Test: Flexibility - no rupture or cracking.
- c. Lockdown Encapsulants: Note: This specification is not applicable to the requirements of this contract.
 - i. ASTM E119: Fire Resistance - 3 hours (Tested with fireproofing over encapsulant applied directly to steel member).
 - ii. ASTM E736: Bond Strength - 100 lbs/ft (Test compatibility with cementitious and fibrous fireproofing).

2.1.2 Warning Labels and Signs: Labels and signs shall conform to CFR 1910.1200 and CFR 1926.1101. Signs and labels shall be in English and Spanish. The lettering/wording is as follows:

**WARNING
POISON
LEAD WORK AREA
NO SMOKING OR EATING**

2.1.3 Solvents: Low odor or Odorless, Low VOC, 100% organic.

2.1.4 Polyethylene: 6 mil transparent polyethylene.

PART 3 EXECUTION

3.1 EXAMINATION

3.1.1 Examine all surfaces before preparing a LBPAP. Notify the ACO of any concerns that may affect the Lead-Based Paint abatement.

3.1.2 Do not start abatement until all concerns have been addressed and authorization to begin abatement has been given by the Contracting Officer.

3.2 PERSONAL PROTECTIVE EQUIPMENT

3.2.1 Worker protection measures, including protective clothing, respirators, and other equipment shall be the responsibility of the Contractor. Ensure that each employee has donned and is wearing the PPE correctly and at all times in the regulated area.

3.2.1.1 Provide the Contracting Officer's Representative with complete sets of personal protective equipment as required for entry to and to inspect the lead control area. Provide the manufacturer's certificate of compliance for all equipment used to contain airborne lead fibers.

3.2.2 Respirators: Select respirators for Lead Abatement Workers that are approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. Do not furnish respirators to Government personnel.

3.2.2.1 Provide personnel engaged in pre-cleaning, cleanup, handling, encapsulation removal and or demolition of LBP and contaminated materials with respiratory protection as indicated in 29 CFR 1926.1101 and 29 CFR 1926.103.

3.2.3 Exterior Whole Body Protection

3.2.3.1 Outer Protective Clothing: Provide personnel exposed to lead with disposable "non-breathable," or reusable "non-breathable" whole body outer protective clothing, head coverings, gloves, and foot coverings. Provide disposable plastic or rubber gloves to protect hands. Cloth gloves may be worn inside the plastic or rubber gloves for comfort, but shall not be used alone. Make sleeves secure at the wrists, make foot coverings secure at the ankles, and make clothing secure at the neck by the use of tape. Reusable whole body outer protective clothing shall be either disposed of as lead contaminated waste upon exiting from the lead regulated work area or be properly decontaminated.

3.2.3.2 Decontamination of Reusable Outer Protective Clothing: When reusable outer protective clothing is used, transport the double bagged clothing to a previously notified commercial/industrial decontamination facility for decontamination. Inspect reusable protective clothing prior to use to ensure that it will provide adequate protection and is not or is not about to become ripped, torn, deteriorated, or damaged, and that it is not visibly contaminated.

3.2.3.3 Eye Protection: Provide eye protection to personnel engaged in lead abatement operations when the use of a full-face respirator is not required.

3.3 PHYSICAL BOUNDARIES (Also known as the Lead Control Zone or Regulated Area)

3.3.1 Determine the Lead Control Zone and install critical barriers, decontamination units, and exhaust ventilation. Provide viewing ports in the critical barriers.

3.3.1.1 The shower room shall be equipped with fresh hot and cold water.

3.3.1.2 Notices and Postings: Provide warning signs printed in English and Spanish at all approaches to lead control areas. Locate signs at a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Provide labels and affix to all lead materials, scrap, waste, debris, and other products contaminated with lead.

3.3.2 Exhaust Ventilation: The Physical Boundary where wet abrasive blasting operations are required shall be designed to optimize the flow of ventilation air past the worker(s), so that the airborne concentration of lead is reduced and the visibility increased. The affected area shall be maintained under negative pressure to reduce the chances that lead dust will contaminate areas outside of the enclosure. The Physical Boundary shall be equipped with dust collection and air-cleaning devices to control emissions of particulate matter to the environment.

3.3.3 Begin LBP abatement only after the Contracting Officer approves the LBPAP.

3.3.3.1 All lead abatement work shall be performed in accordance with the LBPAP and 29 CFR 1926.62, and all applicable Federal, the Great State of California, and local government regulations.

3.3.3.2 Lead-Base Paint Removal Methods

- a. Uncontained water blasting and open abrasive blasting are unacceptable methods of abatement.
- b. Wet abrasive blasting with a vacuum arrangement shall be implemented for all LBP abatements. LBP shall be 100 percent removed from the substrate that is being abated as specified.

3.3.4 Responsible Party: The Contractor's independent CIH consultant shall be responsible for the complete industrial hygiene and environmental oversight of all activities involving the removal, encapsulation, and cleanup of lead containing construction material. This includes the oversight duties during planning, air monitoring, site pre-cleaning and preparation, LBP removal and abatement, surface preparation, restoration, painting, and packaging and disposal of both lead containing and non-lead containing construction waste.

3.3.4.1 The CIH firm consultant shall monitor the Contractor or subcontractor for compliance with all applicable Federal, the Great State of California, and local government regulations pertaining to lead-based paint and other lead containing wastes.

3.3.4.2 Final Clearance: The CIH consultant shall conduct a clearance examination and provide appropriate documentation or statements of Lead-Based Paint compliance. The CIH shall provide the minimum amount of final air clearances in accordance with the specified regulations and LBPAP.

3.3.5 Removal of Hazardous Waste from the Lead Control Zone and Cleanup: At the end of each work shift, remove LBP and contaminated waste, and store in hazardous waste containers. The lids of the hazardous waste containers are to remain secured at all times.

3.3.5.1 Cleanup procedures shall utilize HEPA filtered vacuum systems and/or wet methods, such as mopping, wet wiping, shoveling of debris, etc. No dry sweeping of dust, particulate matter or debris is allowed during any phase of abatement work affecting lead coated surfaces. Clean surfaces shall meet HUD USEPA re-occupancy standard for lead in dust.

3.4 DISPOSAL OF HAZARDOUS WASTE

3.4.1 All waste shall be kept drummed, secured, labeled, and stored in a designated secured storage space on site until test results categorize all waste to be hazardous or non-hazardous.

3.4.2 The Contractor shall be responsible for the proper disposal of all non-hazardous and hazardous waste generated by the lead abatement. The hazardous waste shall be removed from the project site within 48-hours after the completion of a LBP abatement.

3.4.3 The lead-based waste media or other debris shall be stored in a manner that will not allow entry of any hazardous material into the environment. Leak-proof drums or portable bins are acceptable. The waste containers shall be kept out of flood plains or areas where run-off may occur. Weather resistant labels using indelible ink that warn of the potential hazards associated with the material shall be placed on the waste containers. The waste containers shall be marked with the contents, tare weights of the containers, and the origin and date of collection of the material. The waste containers shall be keyed to the samples taken.

3.4.4 All waste shall be disposed of in accordance with applicable Federal, State of California, other states, and local government laws and regulations.

PART 4 FIELD QUALITY CONTROL

4.1 The Contractor shall provide an independent CIH on site at all times during abatement. The CIH shall be independent of the Contractor performing lead abatement.

4.2 Provide air monitoring as required by the LBPAP.

4.3 The Project Supervisor shall ensure that the LBPAP procedures are in place and followed by all personnel involved in the abatement process.

4.4. At the completion of the abatement process, the Contractor shall ensure that all LPB is removed and that the regulated area and adjacent areas are free from all LBP hazardous waste.

4.5 4.5 The Contractor shall provide closeout submittals to the Contracting Officer and Contracting Officer's Representative within three (3) working days of the completion of the lead abatement project.

-- End of Section --

SECTION 02 85 00.00 20

**MOLD REMEDIATION
05/11**

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (AIHA)

AIHA IMOM08-679	(2008) Recognition, Evaluation, and Control of Indoor Mold
AIHA Z9.2	(2006) Fundamentals Governing the Design and Operation of Local Exhaust Ventilation Systems

INSTITUTE OF INSPECTION, CLEANING, AND RESTORATION CERTIFICATION (IICRC)

IICRC S100	(2002) Standard Reference Guide for Professional Carpet Cleaning
IICRC S500	(2006) Standard and Reference Guide for Professional Water Damage Restoration

NATIONAL AIR DUCT CLEANERS ASSOCIATION (NADCA)

ACR	(2006) Standard for Assessment, Cleaning, and Restoration of HVAC Systems
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.134	Respiratory Protection
29 CFR 1926.1101	Asbestos

UNDERWRITERS LABORATORIES (UL)

UL 586	(2009) Standard for High-Efficiency Particulate, Air Filter Units
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1.2 DEFINITIONS

1.2.1 AIHA: American Industrial Hygiene Association.

1.2.2 AFU: Air filtration unit with High Efficiency particulate air (HEPA) filtered vacuum and / or exhaust ventilation equipment with a filter system capable of collecting and retaining microbial contamination AIHA Z9.2. Filters shall retain 99.97 percent of particles 0.3 microns [1.2 by 10-6 inch] or larger as indicated in UL 586.

1.2.3 Categories of Water: (IICRC S500)

1.2.3.1 Category 1 Water: Water originating from a source that does not pose substantial harm to humans. Also referred to as "clean water."

1.2.3.2 Category 2 Water: Water containing a significant degree of chemical, biological and/or physical contamination and having the potential to cause discomfort or sickness if consumed by or exposed to humans. Also referred to as "gray water."

1.2.3.3 Category 3 Water: Grossly unsanitary water, containing pathogenic agents, arising from sewage or other contaminated water sources and having the likelihood of causing discomfort or sickness if consumed by or exposed to humans. This category includes all forms of seawater, ground surface water and rising water from rivers or streams. Also referred to as "black water."

1.2.4 Certified Industrial Hygienist (CIH): A Certified Industrial Hygienist refers to an individual that has been certified by the American Board of Industrial Hygiene (ABIH), with professional qualifications and experience as required for an industrial hygienist, as presented in the definition of "Industrial Hygienist."

1.2.5 Complete Interior Building Demolition (Complete Gut) Interior finishes of the building have been removed to expose basic structural elements.

1.2.6 Containment: Physical separation and engineering controls required to prevent contamination of undamaged materials and occupied areas. The level of containment varies depending on the extent of the contamination.

1.2.6.1 Source Containment: Use when the contaminated surface area is less than 0.93 square meters [10 square feet], in non-residential buildings only. At a minimum, source containment shall include the following:

- a. Isolation of Work Areas. Install polyethylene barriers to isolate the areas or material to be demolished / remediated from non-remediation areas.
- b. Floor protection. Maintain protection for finished floors through all construction activities.
- c. HEPA vacuum to control dust created during the demolition. Hold HEPA vacuum intake at source of dust.

1.2.6.2 Limited Containment: Use when contaminated surface area is between 0.93 square meters and 9.3 square meters [10 square feet and 100 square feet] per room in non-residential buildings and contaminated surface area less than 9.3 square meters 100 square feet per room in residential buildings. At a minimum, limited containment shall include the following:

- a. Containment. For residential buildings (Military Living Quarters), a containment shall include the entire room where work is being performed. The containment shall not extend past the extents of the room unless there are instances of contamination extending from one room to the next. For non-residential buildings, the containment shall include the area to be remediated, plus enough additional area to allow for all equipment and work activities.
- b. Isolation of Work Areas. Install polyethylene barriers to isolate the areas to be demolished / remediated.
- c. Floor protection. Maintain protection for finished floors through all construction activities.
- d. Air Filtration/Pressurization Control: Install AFUs with HEPA filters in the containment. Configure the AFUs with splitters/diverters to allow some of the air to recirculate within the containment. Discharge the remainder of the air directly to the outside to maintain an overall negative pressure in the containment of 5 Pascal's [0.02 inch] water column minimum to 10 Pascal's [0.04 inch] water column maximum relative to the outside and other adjacent spaces not undergoing remediation. AFUs shall filter a minimum of four air changes per hour and a maximum of six air changes per hour.
- e. Protection for all items remaining in the containment: Protective devices shall prevent physical damage (e.g., scratches and dents) and shall provide a positive seal to prevent dust from settling in or on the items.
- f. Containment Entrance: Install a triple-flap poly "door" to be used during demolition to minimize egress and provide a good separation between containment and occupied areas of the house / building.

1.2.6.3 Full Containment: Use when contaminated surface area is greater than 9.3 square meters [100 square feet] in both residential and nonresidential buildings. At a minimum, full containment shall include the following:

- a. Containment: For residential buildings (Military Living Quarters), a containment shall include the entire room where work is being performed. The containment shall not extend past the extents of the room unless there are instances of contamination extending from one room to the next. For non-residential buildings, the containment shall include the area to be remediated, plus enough additional area to allow for all equipment and work activities.
- b. Isolation of Work Areas. Construct polyethylene barriers to isolate the areas to be demolished / remediated.
- c. Floor protection. Maintain protection for finished floors through all construction activities.
- d. Air Filtration / Pressurization Control: Install AFUs with HEPA filters in the containment. Configure the AFUs with splitters/diverters to allow some of the air to recirculate within the containment. Discharge the remainder of the air directly to the outside to maintain an overall negative pressure in the containment of 5 Pascal's [0.02 inch] water column minimum to 10 Pascal's [0.04 inch] water column maximum relative to the outside and other adjacent spaces not undergoing remediation. AFUs shall filter a minimum of four air changes per hour and a maximum of six air changes per hour.

- e. Protection for all items remaining in the containment: Protective devices shall prevent physical damage (e.g., scratches and dents) and shall provide a positive seal to prevent dust from settling in or on the items.
- f. Decontamination: Construct a decontamination airlock for entry into and exit from the work area. The airlock shall be used to HEPA vacuum the sealed bags of contaminated debris. When possible, the decontamination airlock shall be located so that the sealed bags can be passed directly from the airlock to the outside, through a door or window.
- g. Containment Entrance: Install a triple-flap poly "door" at the entrance to the airlock, and between the airlock and the work area during demolition to minimize egress and provide a good separation between containment and occupied areas of the residence/building.

1.2.6.4 Unoccupied Building Containment: Use when a building is unoccupied and large amounts of mold growth are present throughout the building:

- a. Containment: The containment consists of the entire building. Install AFUs with HEPA filters in the building. Configure the AFUs to recirculate within the active remediation area. AFUs shall filter a minimum of four air changes per hour and a maximum of six air changes per hour based on the size of the area undergoing active remediation.
- b. Isolation of Work Areas: Install polyethylene barriers to isolate the areas where remediation is not required. AFU discharge may be used to positively pressurize non-remediation areas from areas undergoing remediation to prevent the movement of spores into "clean" areas.
- c. Floor Protection: Maintain protection for finished floors through all construction activities.
- d. Protection for all items remaining in the containment: Protective devices shall prevent physical damage (e.g., scratches and dents) and shall provide a positive seal to prevent dust from settling in or on the items.
- e. Decontamination: Construct a decontamination airlock for entry into and exit from the building.
- f. Containment Entrance: A triple-flap poly "door" shall be used at the entrance to the work area during demolition to minimize egress.

1.2.6.5 Cleaning Containment: A temporary containment structure set up to clean items removed from the containment. At a minimum, the cleaning area shall contain:

- a. Two chambers: Construct walls with polyethylene. Items will be cleaned in the first chamber. The clean items shall be stored in the second chamber.
- b. Air Filtration/Pressurization Control Cleaning Chamber: Install AFUs with HEPA filters in the cleaning chamber. Configure the AFUs with splitters/diverters to allow some of the air to recirculate within the containment. Discharge the remainder of the air directly to the outside to maintain an overall negative pressure in the containment of 5 Pascal's [0.02 inch] water column minimum to 10 Pascal's [0.04 inch] water column (maximum) relative to the storage chamber.

- c. Air Filtration, Storage Chamber: Install AFUs with HEPA filters in the storage chamber. The AFUs shall be configured to allow air to recirculate within the chamber. AFUs shall filter a minimum of four air changes per hour and a maximum of six air changes per hour.
- d. Containment Entrance: Install a triple-flap poly "door" at the entrance to the cleaning chamber, between the cleaning and storage chambers, and at the exit of the storage chamber to minimize egress and provide a good separation between the chambers.

1.2.7 Decontamination Unit (Airlock): An enclosed area adjacent to, and connected to, a regulated work area. It consists of various rooms that are used for the decontamination of workers, equipment, and materials.

1.2.8 Dehumidifier: Mechanism or machine to remove moisture from the air.

1.2.9 Detergent: A cleaning agent. The term refers to a prepared compound that may include surfactants, builders, dry solvents, softeners, etc, but does not include true soap.

1.2.10 Disinfectants or Biocide Sanitizing Solutions: One of three groups of antimicrobials registered by the EPA for public health uses. The EPA considers an antimicrobial to be a disinfectant when it destroys or irreversibly inactivates infectious or other undesirable organisms, but not necessarily their spores.

1.2.11 EPA: U.S. Environmental Protection Agency.

1.2.12 Fungicidal Agents, (EPA): A coating material that contains an EPA registered fungicide that inhibits the spread and growth of mold with the ability to withstand moist and humid conditions.

1.2.13 HEPA Filter: A High Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97 percent of all particulate larger than 0.3 microns [1.2 by 10-6 inch].

1.2.14 HVAC: Heating, Ventilating, and Air Conditioning (System).

1.2.15 Industrial Hygienist (IH): Industrial Hygienist (IH) refers to an individual designated and provided by the Contractor that is a professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational and indoor air quality hazards. Education shall include a minimum 12 semester hours or quarter hour equivalent of chemistry and 18 additional semester hours or quarter hour equivalent of courses in any combination of chemistry, physics, engineering, health physics, environmental health, biostatistics, biology, physiology, toxicology, epidemiology, or industrial hygiene. The Industrial Hygienist shall be under the supervision of a Certified Industrial Hygienist.

1.2.16 Microbial Remediation Supervisor: Individual responsible for the execution of the microbial remediation work as defined by the scope of work. This individual shall have documented training in microbial remediation and have at least three years of experience in microbial remediation work. Remediation contractor's on-site supervisor shall have one of the following certifications: Council-Certified Mold Remediator (CMR), or Council-Certified Mold Remediation Supervisor (CMRS) as certified by the American Council for Accredited Certification, or Applied Microbial Remediation Specialist (AMRS), Institute of Inspection, Cleaning, and Restoration Certification (IICRC) or ACO approved equivalent.

1.2.17 Non-Porous Material: A material that does not absorb nor is easily penetrated by liquids, especially water. Generally, non-porous materials have a permeable factor of less than 1. Some examples are metal, glass, plastic, ceramic tile, etc.

1.2.18 Occupied Spaces (Areas): The phrase "occupied space" within this specification refers to spaces that are occupied by unprotected non-remediation personnel while work is in progress. It also refers to areas adjacent to work areas that are not currently undergoing remediation.

1.2.19 Personal Protective Equipment (PPE): Any material or device worn to protect a worker from exposure to, or contact with, any harmful material or force. PPE shall be cleaned or disposed of prior to removal from the remediation work area.

1.2.20 Poly: Polyethylene sheet with a minimum thickness of 6 mils.

1.2.21 Porous Material: Permeable materials having the physical properties that allow liquids or gasses to pass through. These materials include but are not limited to the following: gypsum wall board, insulation, wallpaper, ceiling material, carpet, padding, paper goods (i.e., cardboard boxes, loose paper, books, etc.), stuffed furniture, wicker, fabrics, etc.

1.2.22 Pressure Differential Measuring Instrument: Device used to measure the relative pressure difference between the work area and areas outside the work area. For mold remediation, the device shall measure accurately in the 0 to 10 Pascal [0 to 0.04 inch] range.

1.2.23 Semi-porous Material: A material that can absorb liquids if exposed over long periods of time.

These materials include but are not limited to wood, concrete, linoleum, vinyl wall covering, wooden or hardboard furniture, plaster, etc.

1.2.24 Ventilation System Mold Remediation Qualifications (VSMR): An individual certified by the North American Duct Cleaning Association (NADCA) to clean HVAC systems.

1.2.25 Work Area: The area where remediation operations are actively performed and controlled to prevent the spread of dust / spores and entry by unauthorized personnel. A work area is the space, group of spaces, or the building, as defined by the Microbial Assessment Survey.

1.3 REQUIREMENTS

1.3.1 Description of Work: The Contractor, as ordered in a modification to the Task Order, shall perform an initial Microbial Assessment Survey with containment categories and remediation methods specified for each work area and material within the work area. The Contractor's initial Microbial Assessment Survey shall be performed by an approved qualified and certified assessor to perform such work. Viable samples shall be taken and sent to an accredited American Industrial Hygiene Association (AIHA) laboratory for sample testing. The Contractor shall submit the Chain of Custody furnished by the accredited laboratory as part of the Microbial Assessment Survey to the FSC Planning and Technical Branch Supervisor within five (5) calendar days after the Final Acceptance Inspection." The survey will be included in a follow-up new modification to the Task Order (contract).

1.3.2 The Contractor shall develop and submit a Microbial Remediation Plan for all modifications to the Task Order (contract) when a Microbial Assessment Survey has confirmed the presence of mold.

1.3.2.1 In accordance with an approved Microbial Remediation Plan, the Contractor shall perform mold remediation work, including the handling and control of mold contaminated materials and the resultant procedures and equipment required to protect workers, the environment and occupants of the building or area, or both, from contact with mold products and spores. The work also includes the disposal of any mold contaminated materials generated by the work. Install containment and engineering control techniques as specified in the approved Microbial Remediation Plan. All mold contaminated material removal work shall be supervised by a microbial remediation supervisor. The following microbial remediation specifications apply to the cleaning / removal and disposal of fungally-contaminated porous, semi-porous and non-porous surfaces within various types of structures. The level of containment and requirements for cleaning and remediation of materials shall be in accordance with the modification to the Task Order's statement of work and the approved Microbial Remediation Plan.

1.3.2.2 The Contractor shall properly dispose of the removed building material components from within the work site in accordance with the approved Microbial Remediation Plan. Use proper cleaning procedures, engineering controls, and apply best management practices to remove microbial growth and spore fallout from all surfaces and building materials to minimize the further release of microbial spores. Address semi-porous and nonporous surfaces within the facility in each cleaning phase of the project. Damp wipe and HEPA vacuum all surfaces, at a minimum. Remove and dispose of porous building materials that are supporting microbial growth in accordance with the approved Microbial Remediation Plan.

1.4 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES. All task order submittals shall be submitted to the Contracting Officer and COR within 15-calendar days after award of a task order and shall be site specific. Mobilization and work shall not begin until the submittals have been approved by the Contracting Officer.

SD-01 Preconstruction Submittals

- Microbial Assessment Survey, site specific; GA, KO, PO
- Microbial Remediation Plan, site specific; GA, KO, PO
- Worker Records, site specific; GA, KO, PO
- Respiratory Protection Program, site specific; GA, KO, PO
- Certified Industrial Hygienist (CIH)/Industrial Hygienist (IH) Qualifications, site specific; GA, KO, PO
- Microbial Remediation Supervisor Qualifications, site specific; GA, KO, PO

- Ventilation System Mold Remediator Qualifications (VSMR), site specific; GA, KO, PO
- State of California Contractor's License for the Contractor performing the mold remediation; site specific; GA, KO, PO

SD-03 Product Data

- Personal Protective Equipment (PPE), site specific; GA, KO, PO
- Air Filtration Units, site specific; GA, KO, PO
- Dehumidifiers, site specific; GA, KO, PO
- Pressure Differential Measuring Instrument, site specific; GA, KO, PO
- Fungicidal Agents, site specific; GA, KO, PO
- Disinfectants or Biocide Sanitizing Solutions, site specific; GA, KO, PO

SD-11 Closeout

- Supervisor Logs; GA, KO, PO
- CIH Daily Reports; GA, KO, PO
- Photographic Logs; GA, KO, PO
- Contractor's Industrial Hygienist Report certifying the microbial remediation is complete; GA, KO, PO

1.4.1 Preremediation Submittals: Within five (5) calendar days from the award of a Contract task order and prior to the start of the work, submit to the Contracting Officer three hard copies of the following items for review and approval. Once approved submit two copies of the approved submittals on CD, one CD to the Contracting Officer and one CD to the COR.

1.4.1.1 Microbial Remediation Plan: Submit a project-specific plan that has been approved by the Contractor's CIH to the Contracting Officer for approval and prior to start of work. The plan shall include a work plan and schedule. The plan shall address the following items at a minimum:

- a. Description of materials and quantities to be remediated, location drawing, and methods to be used for remediation.
- b. Types of biocides and fungicidal agents, (EPA).
- c. Containment procedures to include description and locations of engineering controls and decontamination unit to include entry and exit procedures (provide drawing of floor plan showing location of containment barriers and decontamination units). Plan shall include locations of AFUs and AFU discharges to the outside.

- d. Description of personal protective equipment to be used during the remediation.
- e. Critical area barricades and barriers in occupied areas.
- f. HVAC Shut down and start-up procedures.
- g. HVAC Evaluation and remediation procedures.
- h. Moisture and relative humidity control procedures and equipment.
- i. Packaging and disposal procedures.
- j. Safety Precautions to include lockout/tag-out, fall protection, confined space entry procedures, and fire protection.
- k. Description of the method to be employed to control cross contamination of areas not in the work area. This shall include a risk assessment related to the suitability of people to occupy areas adjoin the remediation area while remediation activities are ongoing.
- l. IH Quality Control procedures to include visual inspection.
- m. Procedures to control, abate, and dispose of Asbestos Containing Materials (ACM) and Lead Based Paint (LBP) coincident with microbial remediation. Before work in areas containing ACM is begun; Contractor shall identify the presence, location, and quantity of ACM therein pursuant to paragraph (k)(1) of 29 CFR 1926.1101.

1.4.1.2 Respiratory Protection Program: Provide written copy of Contractor's Respiratory Protection program.

1.4.1.3 Worker Records: Submit the following documents for all workers, including supervisory personnel. If new workers are added to the crew, provide the same documentation for them.
Employee Instruction and Release Form: Provide documentation showing that each employee has been instructed on the following items:

- a. Use and fit of respirators (for employees entering and working in the containment).
- b. Protective clothing.
- c. Protective measures.
- d. Safety and Emergency Egress Procedures.
- e. Site specific fall protection plan and training.
- f. Microbial remediation hazards and practices including engineering controls and isolation. Training should include "hands on" training for microbial remediation supervisors.
- g. Workers' release forms stating the potential hazards involved with the scope of the work.
Worker Training Certification: Submit copies of training certificates for each employee

indicating that the employee has received training at the appropriate level for the work prescribed in the description of work.

1.4.1.4 Certified Industrial Hygienist (CIH)/Industrial Hygienist (IH) Qualifications: Submit the name, address, and telephone number of the Certified Industrial Hygienist (CIH) and Industrial Hygienist (IH). Provide copies of board certificates, resume to document field experience, and evidence that the CIH and IH have successfully completed training in microbial investigation and remediation.

1.4.1.5 Microbial Remediation Supervisor Qualifications: Onsite supervisor shall have one of the following certifications: Certified Mold Remediator (CMR), Certified Mold Remediation Supervisor (CMRS), or Applied Microbial Remediation Specialist (AMRS). Submit copies of supervisory training certificates.

1.4.2 Product Data: Within five (5) calendar days from the award of modification to the Task Order (contract) and prior to the start of the work, submit to the Contracting Officer two (2) hard copies of the product data for items identified for use in Microbial Remediation Plan for review and approval. Once approved submit two copies of the approved submittals on CD, one CD to the Contracting Officer and one CD to the COR.

1.4.3 Submittals at Completion of Remediation Work: Within five (5)-calendar days after the "Final Acceptance Inspection" submit the following:

- Supervisor Logs.
- IH Daily Reports.
- Photographic Logs.
- Contractor's Industrial Hygienist Report certifying the microbial remediation is complete.

1.5 RECORD KEEPING

1.5.1 A Daily Project Log shall form a permanent record of each project. Secure and maintain these logs and any other required documentation as part of the permanent project file.

1.5.1.1 Daily Log: The Microbial Remediation Supervisor shall maintain a Daily Project Log. The Daily Project Log shall be used each day of the project to document the following information:

- a. Date.
- b. Name of Microbial Remediation Supervisor.
- c. Name of Industrial Hygienist monitoring work area.
- d. Number of workers on site.
- e. Equipment utilized.

- f. Brief description of daily work activities.
- g. Listing of any non-compliance noted, emergencies, stop work orders (with detailed explanation), exhaust system pressure differential recordings, and descriptions of any other significant events.

PART 2 PRODUCTS

2.1 DISINFECTANTS, BIOCIDES, SANITIZING SOLUTIONS AND FUNGICIDAL AGENTS

2.1.1 Shall be approved by EPA for the use detailed in the Microbial Remediation Plan and used in accordance with the manufacturer's specifications.

PART 3 EXECUTION

3.1 EQUIPMENT

3.1.1 Provide protective clothing and respirators as required by the Microbial Remediation Plan for use by any authorized visitors. Provide manufacturer's certificate of compliance for all equipment used to contain the microbial contamination. Contractor shall not be required to certify that visitors entering work areas be capable of wearing respirators. Personnel that have not certified and fit tested under a Respiratory Protection Program shall not be allowed to enter the controlled area.

3.1.2 Respirators: Respirators shall be selected from those approved by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services. The Contractor shall provide respirators to personnel engaged in set-up, pre-cleaning, cleanup, handling, and removal of contaminated materials with the appropriate respiratory protection as specified in 29 CFR 1910.134. Microbial remediation plan shall consider Table 17.1 in AIHA IMOM08-679 "Recognition, Evaluation, and Control of Indoor Mold", which lists the minimum levels of respiratory protection based on the activity and size of the remediated area.

3.1.3 Protective Clothing: Provide all workers with protective clothing as appropriate for the work being accomplished, as required by the Microbial Remediation Plan. Do not permit any person to enter the work area without the appropriate protective clothing and equipment.

3.1.3 Warning Signs and Labels: Provide bilingual warning signs printed in English and Spanish at all approaches to the work areas. Locate signs at such a distance that personnel may read the sign and take the necessary protective steps required before entering the area. Warning signs may be in the form of continuous plastic tape. The warning signs shall have black characters on a yellow background.

**WARNING
DO NOT ENTER
MICROBIAL REMEDIATION WORK IN PROGRESS**

3.1.4 Dehumidifiers: Install and use dehumidifiers as needed during the remediation to maintain relative humidity below 60 percent in the work area. Drain the condensate water to a permanent drain, or empty as needed to prevent water overflowing from the dehumidifiers.

3.1.5 Air Filtration Units (AFU): Install and use AFUs with HEPA filters, and manufacturer specified pre-filters, as part of the exhaust ventilation system to develop and maintain the specified

desired air pressure differential inside the enclosed work area relative to the outside areas. The Contractor shall be responsible for acquiring and paying for any licenses needed for use of any equipment, including but not limited to, air pressure differential systems and air filtration systems. Replace HEPA filters and pre-filters for AFUs as required to maintain pressurization performance requirements during demolition and cleaning. Do not reuse filters. Bag used filters at a minimum in clear 6 mil polyethylene bags within the containment and disposed as contaminated waste. Discharge air from any AFUs located in the work area containment to the outside environment when creating a negative pressure containment to create a negative pressure relative to occupied areas of 5 Pascal's [0.02 inch H₂O] to 10 Pascal's [0.04 inch H₂O]. Discharge air in excess of that required for creating the proper negative pressure to the work area. The AFUs shall provide four to six air changes per hour in the work area. Under no circumstances may air from AFUs discharge to an occupied area. Coordinate location of window sashes or doors required for discharge openings with the Contracting Officer. Seal around openings used for discharge of exhaust air airtight. Exhaust discharge openings may be constructed of plywood. Seal all exhaust and intake openings in AFUs with one layer of 6 mil polyethylene sheeting when not in use.

3.1.6 Vacuum Cleaners Equipped with HEPA Filters: Provide vacuum cleaners equipped with HEPA filters designed for continuous operation to perform the work in a timely and efficient manner. Provide nozzle attachments as required to adequately remove all dust. As a minimum, nozzle attachments shall include crevice and extended bristle brush nozzles. Any vacuum that is not equipped with a HEPA filter shall not be used at any time. Provide sufficient vacuum cleaners equipped with HEPA filters designed for continuous operation in the work area during microbial remediation inside the containment area. Provide additional vacuum cleaners equipped with HEPA filters in the enclosed work area during remediation or cleaning work as required by the size (area) of the containment and to maintain timely progress of the work.

3.2 GENERAL REQUIREMENTS

3.2.1 Site Specific Pre-Microbial Remediation Work Conference: Meet with the Contracting Officer and COR prior to beginning work to discuss in detail the approved Site Specific Microbial Remediation Plan, including work procedures and safety precautions. Any variances to the plan shall be specifically identified to allow for free discussion and approval by the Contracting Officer in writing prior to starting work. Before work in areas containing Asbestos Containing Material (ACM) and Lead-Based Paint (LBP) is begun, Contractor shall identify the presence, location, and quantity of ACM and LBP. The Contractor is responsible for notification of regulatory authorities.

3.2.2 Containment Entry/Exit Procedure: Ensure that each worker and authorized visitor follows entry and exit procedures detailed in the site specific approved Microbial Remediation Plan.

3.3 REMOVAL PROCEDURES

3.3.1 Protection of Existing Work Areas: Perform work in a manner to minimize the damage or contamination to areas outside or directly adjacent to the work area. Contractor is required to inspect areas inside and outside proposed work areas to identify existing damage and notify Contracting Officer and COR prior to start of work. Where materials outside work area are damaged or contaminated as a result of the Contractors work efforts as verified by the Contracting Officer or COR using visual inspection or sample analysis, it shall be restored to its original condition or decontaminated by the Contractor at no expense to the Government as deemed appropriate by the Contracting Officer. Should adjacent or outside areas become contaminated as a result of the Contractors work efforts the work shall stop immediately. The newly contaminated

areas shall be cleaned and verified by visual inspection by the IH. The work may proceed at the discretion of the Contracting Officer or COR once the area has been verified as restored.

3.3.2 Remediation of Fungally Contaminated Building Materials: The removal of contaminated materials shall follow in general the listed sequence of work. The Contractor may make changes to improve work flow with the approval of the Contracting Officer.

- a. Remediate mold in accordance with the approved Microbial Remediation Plan.
- b. Provide level of containment and PPE required by the Microbial Remediation Plan.
- c. Disable all HVAC units and exhaust fans in the area to be remediated.
- d. Protect materials to remain in work area. Where possible, all materials to be salvaged should be cleaned in place to prevent possible cross-contamination created by moving materials through non-remediation areas.
- e. Remove undamaged items and materials to be cleaned and salvaged from the work area. Materials shall be stored in an area with relative humidity maintained below 60 percent and where temperatures will not damage the material. Notify Contracting Officer and COR of existing damage to items prior to removal.
- f. Set up containments, including protection of materials remaining within the containment and AFUs. Notify Contracting Officer and COR that the area is prepared for remediation activities.
- g. Pre-demolition inspection by the COR.
- h. Demolition and removal / cleaning of contaminated materials.
- i. Post-remediation inspection by the COR.
- j. Perform final cleaning in the containment.
- k. Clean carpet in the containment.
- l. Clearance inspection by the COR.
- m. Duct and HVAC cleaning, if necessary.
- n. Deconstruction of containment, removal of AFUs.
- o. Clean previously removed items prior to returning to occupied area.

3.3.3 Remediation Procedures: Procedures for remediation depend on the amount of mold growth and the type of material with fungal growth.

3.3.3.1 Remediation of Non-Porous Materials: The method of remediating non-porous items shall be:

- a. HEPA vacuum all surfaces.

- b. Damp wipe all surfaces using clean water or a detergent solution.

3.3.3.2 Semi-Porous Materials (Unfinished Wood): The method of remediating unfinished wood-based items, including wood and wood framing in wall cavities, shall be:

- a. Cleaning
 - (1) HEPA vacuum all surfaces.
 - (2) Scrub surfaces with a brush and detergent to remove mold.
 - (3) HEPA vacuum all surfaces to remove dust.
- b. Removal: Where unfinished wood product has been structurally damaged, remove and replace with an equivalent product. This shall include wall studs and sheathing, such as OSB used in flooring, wall, or roof construction.

3.3.3.3 Semi-Porous Materials: The method of surface cleaning semi-porous materials such as concrete, vinyl wall covering, linoleum, leather furniture, and finished wood products shall be:

- a. HEPA vacuum all surfaces.
- b. Damp wipe surfaces with using clean water or a detergent solution. Avoid over-wetting the material.

3.3.3.4 Porous Materials

- a. Carpet
 - (1) Removal: Replace carpet that has remained wet for 48-hours or longer.
 - (2) Cleaning: Use a dry absorbent compound cleaning method as designated by IICRC S100. This method uses an absorbent compound to dissolve, suspend and absorb carpet soils. It does not add moisture back into the carpet.
- b. Gypsum Wallboard (GWB)
 - (1) Removal: Replace Gypsum Wallboard that has remained wet for 48-hours or longer, or has visible mold growth. Where removal of GWB exposes insulation, remove and replace the insulation with an insulation having equal characteristics for insulating value and permeability.
 - (2) Surface Cleaning: Where GWB has a small amount of surface mold growth and the GWB is structurally sound, a surface cleaning method may be used with the permission of the Contracting Officer and COR. The method of surface cleaning GWB shall be HEPA vacuum all surfaces. Surface cleaning shall not be used where mold growth penetrates wallboard substrate.
- c. Ceiling Tile

(1) Removal: Replace ceiling tile that has remained wet for 48-hours or longer, or has visible mold growth.

(2) Surface Cleaning: Where settled dust on ceiling tiles contains mold spores and the ceiling tile is structurally sound, is not sagging, and has not been wet, a surface cleaning method may be used with the permission of the Contracting Officer. The method of surface cleaning ceiling tile shall be HEPA vacuum all surfaces. Surface cleaning shall not be used where mold growth is occurring on ceiling tiles.

d. Textiles

(1) Discard textiles with visible mold growth.

(2) Clean textile based items, including clothing, linens, and toys that do not have visible mold growth, but have been wet, in standard commercial or residential washing machines with standard washing machine detergent.

(3) Dry all items completely before returning to the building / house.

(a) When possible, use dryers to dry items.

(b) If dryers will cause irreversible harm to the item, hang the item on a drying rack in a temperature and humidity controlled space. Discard items not dry within 48 hours.

e. Upholstered Furniture

(1) Removal: Discard upholstered furniture that has remained wet for 48-hours or longer, or that have visible mold growth.

(2) Cleaning: Clean upholstered furniture that has been exposed to mold spores but does not have visible mold growth by HEPA vacuuming upholstery and wood or metal structure, followed by a damp wipe of semi-porous or non-porous portions of the furniture.

3.4 DETAILED SEQUENCE OF WORK FOR MOLD REMOVAL UNDER CONTAINMENT

3.4.1 Preparation for Remediation Work

- a. Provide level of containment and PPE required for the remediation based on the approved Microbial Remediation Plan.
- b. Disable all HVAC units and exhaust fans in the area to be remediated.
- c. Remove undamaged materials from the work area if they are to be salvaged but cannot be cleaned in place. Store materials in an area with relative humidity maintained below 60 percent and where temperatures will not damage the material. Notify Contracting Officer and COR of existing damage to items prior to removal. Clean materials using procedures detailed in approved Microbial Remediation Plan procedures.

- d. Remove supply diffusers, return grilles and exhaust grilles. Clean diffusers and grilles using procedures detailed in approved Microbial Remediation Plan procedures.
- e. Construct containment barriers. Existing walls can be used as a portion of the containment barriers if existing openings in walls (such as doors, wall openings, vents, etc.) are sealed using polyethylene.
- f. Install the AFUs and dehumidifiers.
- g. Seal supply, return, and exhaust openings with polyethylene sheeting and protect intakes to air handling units. Air handling units shall remain off.
- h. Install all equipment needed for removal work in the containment area to minimize egress during demolition.
- i. The Contracting Officer or COR will inspect the containment to verify that the containment is properly constructed and the containment area has an overall negative pressure of 5 to 10 Pascal's [0.02 to 0.04 inch] water column relative to the outside and adjacent work areas not undergoing active remediation, prior to beginning demolition work.

3.4.2 Demolition

- a. Remove mold contaminated materials to be discarded, such as paper, and furniture. Double bag material in 6 mil poly bags. Seal poly bags using duct tape inside the containment. HEPA vacuum bags before removing them from the containment or airlock. When possible, pass the bags directly from the containment or airlock to the outside. Transport bags to a Contractor furnished containers that are labeled for mold. Do not leave the bags at the building.
- b. Remove contaminated gypsum wallboard (GWB) at the preliminary limits of demolition specified in the approved Microbial Remediation Plan. Inspect back side of removed GWB. If mold is observed on the back side of the GWB, report this condition to the Contracting Officer and COR. After obtaining Contracting Officer approval, continue removing GWB until no mold is observed. If hidden mold is discovered that will extend past the extents of the containment, stop work immediately and reconstruct the containment to extend past the suspected contamination. Re-evaluate level of containment and PPE. Continue to operate AFUs during reconfiguring of containment.
- c. Remove drywall by cutting in pieces as large as possible to minimize aerosolization of fungal spores. Drywall screws can either be backed out during removal or later during cleanup.
- d. Use dust collection attachments on all power tools, such as sanders, saws, etc., to capture dust created when using the tools. Outlet of dust collector should discharge into inlet of AFU.
- e. Remove fiberglass insulation behind removed gypsum board.
- f. If wood studs are contaminated, scrub them with a brush and detergent to remove mold.
- g. Clean all metal framing with a dilute detergent solution.

- h. Remove contaminated carpet scheduled for removal.
- i. Place removed gypsum board, insulation, carpet and remaining debris in two layers of 6 mil poly bags. Seal poly bags using duct tape inside the containment. HEPA vacuum bags before removing them from the containment or airlock. When possible pass the bags directly from the containment or airlock to the outside. Transport bags to a Contractor furnished containers that are labeled for mold. Do not leave the bags at the building. Remediation workers shall HEPA vacuum their PPE, then remove them within the airlock chamber. Discard disposable coverall suits into a 6 mil poly bag.

3.4.3 Post-Demolition Inspection

- a. The COR will inspect the containment area to verify that all contaminated materials have been removed.
- b. Allow a minimum of 12-hours after completion of removal work, with AFUs operating, for airborne dust in the containment to settle and / or be removed by the AFUs.

3.4.4 Cleaning after Demolition, and Cleaning of Settled Spores from Porous/ Non-Porous Materials

- a. Continue to operate AFUs during cleaning.
- b. Clean exposed surfaces.
 - (1) HEPA vacuum all surfaces.
 - (2) Damp wipe all non-porous exposed surfaces including polyethylene sheets used to protect materials, external surfaces of ductwork, studs, and floors with clean rag and clean potable water or detergent solution.
 - (3) Remove poly sheeting inside the containment.
 - (4) HEPA vacuum all surfaces protected by poly sheeting.
 - (5) Damp wipe non-porous surfaces protected by poly sheeting with clean water or a detergent solution.
 - (6) Clean carpet using procedures in Remediation of Fungally Contaminated Building Materials.
- c. Final clearance inspection will be conducted by Contractor's independent certified Industrial Hygienist. Clearance inspections will be performed using the procedures detailed in The approved Microbial Remediation Plan Post-Remediation Inspection procedures. Maintain containments in place until spaces are inspected and accepted by the Contracting Officer or COR as being fully remediated. The Contracting Officer or COR will determine whether the Contractor shall conduct additional cleaning and repeat the clearance process.
- d.

3.5 DUCT AND HVAC SYSTEM CLEANING

3.5.1 Contractor Qualifications: If it is determined by the Government that the duct and HVAC system(s) need to be cleaned of mold then the Contractor shall meet the following:

- a. The HVAC cleaning Contractor shall be a certified member of NADCA.
- b. The HVAC cleaning Contractor shall have at least one individual with Ventilation System Mold Remediation Qualifications certified by NADCA onsite during duct and HVAC system cleaning.

3.5.2 Inspection: The certified IH shall visually inspect the HVAC system serving all work areas and determine if additional remediation is needed to clean the HVAC system, thus preventing recontamination. Notify the Contracting Officer and COR of the inspection results. The Contractor shall receive written approval from the Contracting Officer or COR before proceeding with HVAC microbial remediation.

- a. Follow requirements of the NADCA ACR "Standard for Assessment, Cleaning, and Restoration of HVAC Systems".
- b. Using a "gassing" or "fogging" method of cleaning with gaseous chlorine dioxide or ozone will not be allowed.
- c. Disable all HVAC equipment prior to cleaning any component of the system.
- d. The method of cleaning the air handling units, terminal units, blowers and exhaust fans shall be:
 - (1) Construct a limited containment around equipment to be cleaned. Provide appropriate PPE for workers.
 - (2) Remove filters. Seal filters in 6-mil poly bags for disposal.
 - (3) Disassemble units as necessary to clean components.
 - (4) Clean disassembled components within the containment or in a separate two chamber cleaning containment. Seal disassembled components in 6-mil poly bags for transport out of building.
 - (5) HEPA vacuum all surfaces.
 - (6) Damp wipe all non-porous surfaces and components with clean water or a detergent solution.
- e. The method of cleaning HVAC coils shall be:
 - (1) Clean coils using a method which will render the coil visibly clean. Clean condensate drain pans.
 - (2) Rinse coils and drain pans with clean water to remove any latent residues.

- f. The method of cleaning the duct system shall be:
- (1) During cleaning, connect a vacuum collection system to the downstream end of the section being cleaned. The vacuum collection device shall be of sufficient power to render all areas of duct being cleaned under negative pressure relative to rooms and areas of duct not being cleaned.
 - (2) Equip the vacuum collection systems with HEPA filters. Exhaust the vacuum collection systems directly to the outside.
 - (3) Use mechanical agitation devices to dislodge debris adhered to the ductwork, such that debris may be safely conveyed to vacuum collection devices.
 - (4) HEPA vacuum duct surfaces.
 - (5) When possible, damp wipe metal duct surfaces with clean water or detergent solution. Do not wet fibrous glass thermal or acoustical insulation.
 - (6) Identify areas where there is evidence of damage to or uncleanable mold in duct insulation. Remove the contaminated duct insulation. Seal contaminated insulation in double 6 mil poly bags for transport out of building. Dispose of the contaminated duct insulation into Contractor furnished containers that are labeled for mold.
- g. Final clearance of HVAC and duct system will be based on a visual assessment (no visible dust, no visible mold) by the Contractor's independent certified IH. Maintain containments in place until duct is inspected and accepted by the Contracting Officer or COR as being fully remediated. The Contracting Officer or COR will determine whether the Contractor shall conduct additional cleaning and repeat the clearance process.

3.6 FIRE PROTECTION

3.6.1 The Contractor shall provide portable fire extinguishers within the containment area and outside the decontamination unit. Fire extinguishers shall be rated for the class of fire hazards in the work area and shall be sized for coverage of the areas within the containment. At a minimum, one 4.5 kg [10 pound] ABC fire extinguisher for every 930 square meters [1,000 square feet] shall be strategically placed around the containment. Personnel shall be trained for emergency egress and the use of fire extinguishers.

3.7 CONSTRUCTION BARRIERS

3.7.1 The following criteria shall be implemented:

- a. Do not disturb microbial-contaminated building materials while isolating work areas. This precaution prevents the release of microbial spores.
- b. Workers shall wear respirators and other PPE as outlined in the approved Microbial Remediation Plan when installing critical barriers where microbial contaminated surfaces (walls or surfaces with visible settled dusts) are likely to be disturbed. Operate an AFU if disturbance is likely during setup.

- c. Monitor the air pressure differential across work area containments. The monitoring system shall be in place before the start of remedial activities. Verification by the Industrial Hygienist is required prior to the start of the microbial remediation.

3.8 QUALITY ASSURANCE / QUALITY CONTROL REQUIREMENTS

3.8.1 Contractor Qualifications: Work shall be performed by a State of California licensed mold remediation Contractor. The Contractor or subcontractor(s) shall carry insurance that specifically covers mold remediation. The approved remediation Contractor's on-site supervisor shall have one of the following certifications: Certified Mold Remediator (CMR), Certified Mold Remediation Supervisor (CMRS), or Applied Microbial Remediation Specialist (AMRS). Qualified supervisor shall be onsite whenever active remediation is being performed. Set-up activities may be performed without supervisor present; qualified supervisor shall review set-up prior to start of work. Mold remediation workers shall be given training in PPE and mold remediation activities as required for their particular job. The approved site specific Microbial Remediation Plan shall provide details of worker training.

3.8.2 Waste Management and Removal: Keep the site and work area free from accumulations of dust, waste materials, or rubbish caused by Contractor remediation operations and free from any flammable materials or other sources of fire hazard. Remove all contaminated mold waste materials and rubbish from and about the work site in strict accordance with the approved site specific Microbial Remediation Plan and all regulations.

3.8.3 Post-Remediation Inspection: Clean up all debris and dust in interior spaces outside the work area resulting from the Contractor's remediation work. After all visible accumulations of material and debris are removed from the containment area and the air clearance has been found acceptable for entry into the area(s), provide the Contracting Officer and COR a 24-hour notice for a final visual inspection. The Contracting Officer or COR and Contractor's Industrial Hygienist shall conduct a thorough visual inspection of the work area. If during this inspection any visible debris and/or microbial contamination are observed, the Contractor shall re-clean the work area without additional cost to the Government.

3.8.3.1 Clearance

- a. Clearance Criteria: Clearance will be based on visual assessment (all visible mold removed, all visible dust removed, based on a "white glove" test) by Contracting Officer or COR. The Contractor's independent certified IH shall perform a "White glove" test in the presence of the Contracting Officer or COR that consists of wiping the surface with a clean cloth of color suitable to reveal expected type of dust. For most surfaces, a white cloth is suitable. For GWB dust, a dark cloth may be more appropriate.
- b. Failed remediation areas will be re-cleaned and the AFUs kept in operation another 12-hours, followed by another visual assessment. Subsequent failures will follow the same routine until a pass condition is secured.

3.9 CLEAN-UP AND DISPOSAL

3.9.1 Disposal of Material: Dispose of contaminated bagged waste materials removed during this remediation as general construction debris. Dispose of the contaminated mold waste in accordance with the site specific Microbial Remediation Plan and follow all applicable local, Great State of California, and Federal requirements for the disposal of this material.

3.9.2 Material Packaging: Place contaminated bagged mold waste into a disposal container in accordance with the approved site specific Microbial Remediation Plan. Contractor furnished disposal waste containers shall be lined with a minimum of two layers of clear 6 mil polyethylene. Tape as necessary to form an airtight seal and label appropriately.

3.9.3 Building Exit (Waste Disposal): HEPA vacuum and damp wipe bags of contaminated waste material prior to removal from the building.

3.9.4 Hazardous Material: Should the Contractor encounter any hazardous materials, notify the Contracting Officer and COR immediately for direction.

-- End of Section --

SECTION J-2

MARINE CORPS BASE CAMP PENDLETON AND NAVAL WEAPONS STATION SEAL
BEACH FALLBROOK DETACHMENT, CA

SECTION J-2.1

**MARINE CORPS BASE CAMP PENDLETON AND NAVAL WEAPONS STATION SEAL
BEACH FALLBROOK DETACHMENT, CA SPECIAL REQUIREMENTS**

SECTION 02 41 00	SITE DEMOLITION
SECTION 06 10 00 20	ROUGH CARPENTRY
SECTION 09 90 00 00	PAINTS AND COATINGS

--End of Section --

SECTION 02 41 00

SITE DEMOLITION

PART 1 GENERAL

1.1 REFERENCES

AMERICAN NATIONAL STANDARDS INSTITUTE, INC. (ANSI)

ANSI A10.6

Demolition Operations

1.2 SUMMARY

1.2 Prepare a task order specific Demolition Plan and submit to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order for review and approval. The Demolition Plan shall provide a detailed narrative of how the Contractor will perform salvage, demolition, and removal procedures during construction operations. Include in the Demolition Plan procedures for careful removal and disposition of materials specified to be salvaged, coordination with other work in progress, a disconnection schedule of utility services, and airfield lighting, a detailed description of methods and equipment to be used for each operation and of the sequence of operations. Identify components and materials to be salvaged for reuse or recycling in accordance with the approved Recycle Plan. Append tracking forms for all removed materials indicating type, quantities, condition, destination, and end use. Coordinate the demolition Plan with the approved Waste Management Plan. Provide procedures for safe conduct of the work in accordance with EM 385-1-1. The Demolition Plan shall be approved prior to mobilization and construction operations.

1.2.1 General Requirements: Do not begin demolition until authorization is received from the Contracting Officer. The work of this section is to be performed in a manner that maximizes salvage and recycling of materials. Police and remove rubbish and debris from the project site daily. In the interest of occupational safety and health, perform the work in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections.

1.3 ITEMS TO REMAIN IN PLACE

1.3.1 Take necessary precautions to avoid damage to existing items to remain in place, to be reused, or to remain the property of the Government. Repair or replace damaged items to the approval of the Contracting Officer and Contracting Officer's Representative. Coordinate the demolition work with other scheduled construction operations. When trenching, install and maintain shoring, bracing, and supports in accordance with the EM-385-1-1 and OSHA 29 CFR 1926 Construction standards. Ensure that structural elements are not overloaded. Increase structural supports or add new supports as may be required as a result of any cutting, removal, deconstruction, or demolition work performed under a task order. Do not overload structural elements or pavements to remain. Provide new supports and reinforcement for existing construction weakened by demolition, deconstruction, or removal work. Repairs, reinforcement, or structural replacement require approval by the Contracting Officer prior to performing such work.

1.3.2 Existing Construction Limits and Protection: Do not disturb existing construction beyond the extent of the defined task order construction zone. Provide temporary shoring and bracing for

support of building components to prevent settlement or other movement. Provide protective measures to control accumulation and migration of dust and dirt in all work areas. Remove dust, dirt, and debris from work areas daily.

1.3.3 Weather Protection: For portions of the building to remain, protect building interior and materials and equipment from the weather at all times.

1.3.4 Trees: Protect trees within the project site which might be damaged during demolition or deconstruction, and which are indicated to be left in place, by a 6-foot high fence. Erect and secure fence as specified in the issued Category Exclusion and Decision Memorandum. Replace any tree designated to remain that is damaged during the demolition work under a task order with like-kind or as approved by the Contracting Officer and Contracting Officer's Representative.

1.3.5 Utility Service: Maintain existing utilities as indicated in a task order to stay in service and protect against damage during demolition and deconstruction operations. Prior to start of work, utilities serving each area of alteration or removal will be shut off by the Government and disconnected and temporarily sealed by the Contractor.

1.3.6 Facilities: Protect electrical and mechanical services and utilities. Where removal of existing utilities and pavement is specified or indicated on a task order, provide approved barricades, temporary covering of exposed areas, and temporary services or connections for electrical and mechanical utilities. Components that are designed and constructed to stand without lateral support or shoring, and are determined to be in stable condition, shall remain standing without additional bracing, shoring, or lateral support until demolished or deconstructed, unless directed otherwise by the Contracting Officer. Ensure that no elements determined to be unstable are left unsupported and place and secure bracing, shoring, or lateral supports as may be required as a result of any cutting, removal, deconstruction, or demolition work performed under this contract.

1.3.7 Burning is not permitted.

1.3.8 Foreign Object Damage (FOD): When working within the MCAS or around aircraft the following shall apply:

1.3.8.1 Aircraft and aircraft engines are subject to FOD from debris and waste material lying on airfield pavements. Remove all such materials that may appear on operational aircraft pavements due to the Contractor's operations. If necessary, install temporary FOD barriers, at the Contractor's expense, to control the spread of FOD and other debris. The FOD barrier shall consist of a fence covered with a fabric designed to stop the spread of debris; anchor the fence and fabric to prevent displacement by winds or jet/prop blasts. Remove FOD barrier when the potential of FOD longer a concern.

1.4 REGULATORY AND SAFETY REQUIREMENTS

1.4.1 Comply with Federal, Great State of California, San Diego County Air Pollution Control Board (APCD), the respective Activity's Environmental Security Office and other local agency regulatory requirements. In addition to the requirements of the "Contract Clauses," safety requirements shall conform to ANSI A10.6, "Demolition Operations."

1.4.2 Dust and Debris Control: Prevent the spread of dust and debris to occupied portions of the building (interior and exterior) or on airfield pavements, and avoid the creation of a nuisance or hazard in the surrounding areas. Do not use water if it results in hazardous or objectionable

conditions such as, but not limited to, ice, flooding, or pollution. Sweep pavements as often as necessary to control the spread of debris.

1.5 SAFETY

1.5.1 The Contractor shall install a temporary safety fence around the facility in accordance with the Demolition Plan. The temporary safety fence shall remain in place until all roofing operations have been completed.

1.6 DEMOLITION PLAN

1.6.1 The Contractor shall develop a Demolition Plan for roof tear-offs. Submit the plan to the Contracting Officer and COR within 15-calendar days after award of a task order. The Contractor shall not mobilize or start work until the plan has been approved by the Contracting Officer.

1.6.1.1 The plan shall be site specific. The plan shall include a site drawing that indicates the safety zone, where the temporary safety fence will be installed, where the points of ingress/egress are, protective canopies will be installed, points of access to the roof for tradesmen, and the points where roofing debris will be discarded off of the roof. . The plan shall also include fall protection measures and dust control measures. Note: Canopies shall be installed at points of ingress/egress to the facility to allow occupants accessibility to the facility. Refer to the EM-385-1-1 for additional requirements in developing the plan.

1.7 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity's Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Pre-Construction Submittals

- Demolition Plan; GA, KO, PO
- Dust Control Plan; GA, KO, PO

PART 2 PRODUCTS

“Not Used”

PART 3 EXECUTION

3.1 UTILITIES AND RELATED EQUIPMENT

3.1.1 General Requirements: Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by the Government. Do not interrupt existing utilities serving facilities occupied and used by the Government except when approved in writing. Do not begin demolition

or deconstruction work until all utility disconnections have been made by the Government.

3.1.2 Disconnecting Existing Utilities: Remove existing utilities, as indicated in the approved Task Order Plan/Work Order Plan and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer and Contracting Officer's Representative. When utility lines are encountered, but are not indicated on the drawings, notify the Contracting Officer and Contracting Officer's Representative prior to further work in that area. Remove meters and related equipment that may be reused or reinstalled at a later date and store in a safe location for future reinstallation or deliver the meters and related equipment to the Activities Utility Section as directed by the Contracting Officer and Contracting Officer's Representative.

3.1.3 Chain Link Fencing:

3.1.3.1 Deconstruct existing chain link fencing, gates and hardware to accommodate construction operations. Store the chain link fencing, gates and hardware designated for reinstallation in the designated staging area as defined by the site Category Exclusion and Decision Memorandum.

3.1.3.2 Remove chain link fencing, gates and other related salvaged items scheduled for removal and disposal. Dispose of the chain link fence, gates and hardware at an approved recycle center. The chain link fence, gates and hardware may be stored in the designated staging area as defined by the site Category Exclusion and Decision Memorandum.

3.1.4 Paving and Slabs: Sawcut and remove concrete (PCC) and asphaltic concrete (AC) paving and slabs and sidewalks/drives to depth as indicated in an approved Task Order Plan/Work Order Plan. Layout and sawcut in accordance with the Camp Pendleton Requirements (CPR) or in accordance with the respective Activity's requirements. Perform straight and true sawcuts cutting completely through the PCC and AC to the base material. Transport and dispose of the AC and PCC at an approved recycle facility off of the respective Activity. Do not dispose of the PCC and AC on the premises of the respective Activity's.

3.1.5 Airfield Lighting: Remove existing airfield lighting as indicated in an approved Task Order Plan/Work Order Plan and terminate in a manner satisfactory as indicated in an approved Task Order Plan/Work Order Plan. Dispose of the air field lighting in accordance with the approved Demolition Plan and off of the Activities premises.

3.2 MECHANICAL SYSTEMS AND RELATED COMPONENTS

3.2.1 Tear-Off: Remove the minimum surface of roofing systems to remove HVAC curbs and flashing, to include plumbing and electrical flashings. Clean the area and substrate of dust, debris, moisture, and other substances that is detrimental to making the roofing repair waterproof. Secure new curb(s) and new flashing(s) in accordance with the manufacturer's instructions and to industry standards.

3.2.1.1 Seal off all penetrations from the weather elements, rodents, fowl and other animals, and from dirt and debris. Cover large openings by securing two layers of ¾-inch plywood over the opening. Place delineators and safety caution tape around the sealed off openings to warn workers to be cautious of the opening.

3.2.2. Remove HVAC equipment as specified in an approved Task Order Plan/Work Order Plan Disconnect electrical, plumbing and duct work to facilitate the HVAC equipment replacement or

work around existing roof mounted electrical conduit and plumbing (gas, high temperature water, water and other pipe or lines). Remove and replace deteriorated wood supports. Submit a "Utility Outage Request" to de-energize electrical, water and gas. De-energize electrical, and shut off gas high temperature water and water ONLY after the "Utility Outage Request" has been approved. Remove and replace, as necessary, HVAC condensate lines.

3.2.2.1 The Contractor shall remove the refrigerant from HVAC units in accordance with all regulations prior to disposal of the units. ONLY State of California licensed refrigeration technicians may remove and replace refrigerant from HVAC units. Removed refrigerant becomes the responsibility of the Contractor and shall be disposed of in accordance with all regulations.

3.2.3 Do not reuse metal flashings, with the exception of B-Vent flue vent pipe flashing that is no longer being produced. Replace B-Vent flue pipe as specified in a task order; Exception: If the existing B-Vent flue pipe is no longer being produced, and an adapter of a different manufacturer to adapt to the existing B-Vent flue pipe is not available, the Contractor may reuse the existing B-Vent flue pipe. The vent cap shall not be reused.

- a. After the B-Vent flue pipe has been reinstalled, The QCM shall inspect the B-Vent flue pipe for proper connection and air tightness in the attic space. The QCM shall ensure that carbon monoxide gases do not escape into the attic space or in any other space of occupancy.

3.3 DISPOSAL

3.3.1 Dispose of recyclables and waste in accordance with Section 01 62 35 "Recycled/Recovered Materials and Section 01 74 19 "Construction and Demolition Waste Management." The Contractor shall provide waste containers, e.g. dumpsters or roll-offs, at the project sites. Do not use Government provided facility dumpsters or roll-offs to discard materials, equipment, equipment components, rubbish and debris.

3.3.2 Dispose of all ferrous and non-ferrous recyclable metals, to include but not be limited to, flashings, curbs, HVAC equipment, pipe, and ductwork at an approved recycling center.

3.3.3 Dispose of rubbish and debris in accordance with the approved "Construction and Demolition Waste Management."

3.4 CLEANUP

3.4.1 The work site shall be cleaned up of all materials, equipment, rubbish and debris that are a direct result of the demolition operation at the end of the work shift.

3.4.2 Store all demolition materials in containers or on pallets. Materials and equipment shall be stored in the laydown/staging area as indicted on the issued task order specific Category Exclusion or Decision Memorandum. Under no circumstances shall the Contractor randomly store, place or pile demolition materials on the ground or on other adjacent surfaces.

3.4.2 All materials, equipment, rubbish and debris shall be removed from each task order project site prior to scheduling the "Final Acceptance Inspection."

-- End of Section --

SECTION 06 10 00 20

ROUGH CARPENTRY

PART 1 GENERAL

1.1 SUMMARY

1.1.1 All work shall conform to the Activities most recent adopted edition of the International Building Code edition.

1.2 REFERENCES

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

AMERICAN FOREST & PAPER ASSOCIATION (AFPA)

AFPA NDS	National Design Specification for Wood Construction and Supplement Design Values for Wood Construction
AFPA WCD1	Wood Frame Construction Data No. 1

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B18.2.1	Square and Hex Bolts and Screws Inch Series
ANSI B18.5.2.1M	Metric Round Head Short Square Neck Bolts
ANSI B18.6.1	Wood Screws (Inch Series)

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

APA E30	Design/Construction Guide, Residential and Commercial
APA E445	Structural-Use Panels (APA PRP-108)
APA F405	Performance Rated Panels

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME/ANSI B18.2.2	Square and Hex Nuts (Inch Series)
ANSI/ASME B18.5.2.2M	Metric Round Head Square Neck Bolts

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 653/A 653M	Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 687	High-Strength Non-headed Steel Bolts and Studs
ASTM C 79/C 79M	Treated Core and Non-treated Core Gypsum Sheathing Board
ASTM C 208	Cellulosic Fiber Insulating Board
ASTM F 1667	Driven Fasteners: Nails, Spikes, and Staples

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

AWPA C1	All Timber Products – Preservative Treatment by Pressure Processes
AWPA C2	Lumber, Timber, Bridge Ties and Mine Ties-Preservative Treatment by Pressure Processes
AWPA C9	Plywood - Preservative Treatment by Pressure Processes
AWPA C20	Structural Lumber - Fire-Retardant Treatment by Pressure Processes
AWPA C27	Plywood - Fire-Retardant Treatment by Pressure Processes
AWPA C28	Structural Glued Laminated Members and Laminations Before Gluing, Pressure Treatment
AWPA M2	Inspection of Treated Wood Products
AWPA M6	Brands Used on Forest Products

INTERNATIONAL BUILDING CODE

IBC	(2009) International Building Code
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U.S. DEPARTMENT OF COMMERCE PRODUCT STANDARDS (PS)

PS-1	Construction and Industrial Plywood
PS-20	American Softwood Lumber Standard

WEST COAST LUMBER INSPECTION BUREAU (WCLIB)

WCLIB 17

Standard Grading and Dressing Rules for
Douglas Fir, Western Hemlock, Western
Red Cedar, White Fir, Spruce Lumber

WESTERN WOOD PRODUCTS ASSOCIATION (WWPA)

WWPA WLGR

Western Lumber Grading Rules

1.3 SUBMITTALS

SD-01 Pre-Construction Submittals

- Subcontractor, if used, to include company name, a copy of the subcontractor's California State Contractor's License, address and phone number, task order specific ; GA, KO, PO

SD-03 Product Data

- Submit product data for all materials that will be incorporated into the project as specified in the Task Order Plan/Work order Plan and shop drawings, task order specific; GA, KO, PO

Note: Fasteners, to include nails, screws, bolts, etc shall be American made of fall under the North American Free Trade Agreement (NAFTA)

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Deliver materials to the site in an undamaged condition. Store materials off the ground to provide proper ventilation, drainage, and protection against dampness. Remove defective and damaged materials and provide new materials.

1.5 PROJECT CONDITIONS

1.5.1 Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed.

1.6 PERFORMANCE REQUIREMENTS

1.6.1 Make all repairs and replacements free of deficiencies and construction defects.

1.6.2 Make repairs to structural, non-structural, sheathing, and fascia with like size and dimensions of the existing members.

1.6.3 Make all repairs in accordance with the latest edition of the International Building Codes.

1.7 CONTRACTOR, SUBCONTRACTOR AND TRADESMEN

1.7.1 The Contractor shall submit to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order the submittal for each subcontractor selected to perform carpentry work.

PART 2 PRODUCTS

2.1 Submit product data for all materials that will be incorporated into a project as specified in the Task Order Plan/Work order Plan and shop drawings to the Contracting Officer and Contracting Officer's Representative within 15-calendar days after award of a task order for review and approval.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Installation all structural and non-structural members, and sheathing in accordance with the Activities adopted edition of the International Building Code and to industry standards. Cut and trim components to match and fit to existing components. There shall be no gaps or spacing in abutting components. All structural and non-structural members, and sheathing shall be installed straight, true, plumb and level.

3.2 PAINTING

3.2.1 Prime and paint ALL EXPOSED wood installed to match the existing color of like surfaces in accordance with Marine Corps Base Camp Pendleton's Base Exterior Architectural Plan (BEAP). Painting specifications shall be in accordance with SECTION 09 90 00 00. Back-prime all surfaces that abut concrete and masonry surfaces.

3.3 INSPECTION

3.3.1 Schedule Contracting Officer's Representative to inspect all structural repairs before said repairs are concealed. Notify the Contracting Officer's Representative a minimum of two days prior to the requested inspection.

-- End of Section --

SECTION 09 90 00 00

PAINTS AND COATINGS

PART 1 GENERAL

1.1 Summary

1.1.1 The work encompasses the priming and paintings of newly installed and adjacent existing components of roof systems.

1.2 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only. The most current references apply throughout the contract.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 2092	Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting
ASTM D 2824	Aluminum-Pigmented Asphalt Roof Coatings, Non-Fibered, Asbestos Fibered, and Fibered Without Asbestos
ASTM D 4214	Evaluating the Degree of Chalking of Exterior Paint Films
ASTM D6386	(2010) Standard Practice for Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting

GREENGUARD ENVIRONMENTAL INSTITUTE (GEI)

GEI	Greenguard Standards for Low Emitting Products
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MASTER PAINTERS INSTITUTE (MPI)

MPI 6	(Oct 2009) Primer, Latex for Exterior Wood
MPI 11	(Oct 2009) Exterior Latex, Semi-Gloss, MPI Gloss Level 5

MPI 119	(Oct 2009) Exterior Latex, Gloss
MPI 135	(Oct 2009) Primer, Galvanized, Non-Cementitious

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-50557	Primer, Water-Borne, Acrylic or Modified Acrylic, For Metal Surfaces
CID A-A-50570	Paint, Water-Borne, Acrylic or Modified Acrylic, Semigloss, for Metal Surfaces

FEDERAL STANDARDS (FED-STD)

FED-STD-313	(Rev. C) Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities
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FEDERAL SPECIFICATIONS (FS)

FS TT-P-19	(Rev. D; Am. 1) Paint, Latex (Acrylic Emulsion, Exterior Wood and Masonry)
FS TT-P-38	(Rev. E) Paint, Aluminum (Ready-Mixed)

STEEL STRUCTURES PAINTING COUNCIL (SSPC)

SSPC Guide 6	(2004) Containing Debris Generated During Paint Removal Operations
SSPC Guide 7	(2000) Disposal of Lead- Contaminated Surface Preparation Debris
SSPC QP 1	(1998; E 2004) Standard Procedure for Evaluating Painting Contractors (Field Application to Complex Industrial Structures)

SSPC PA 1	(2000; E 2004) Shop, Field, and Maintenance Painting
SSPC PA Guide 3	(1982; E 1995) Safety in Paint Application
SSPC VIS 3	(2004) Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning
SSPC SP 1	(1982; E 2004) Solvent Cleaning
SSPC SP 2	(1982; E 2004) Hand Tool Cleaning

U.S. DEPARTMENT OF DEFENSE (DOD)

MIL-PRF-680	(2010; Rev C) Degreasing Solvent
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U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA Method 24	(2000) Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings
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U.S. GENERAL SERVICES ADMINISTRATION (GSA)

FED-STD-313	(Rev D; Am 1) Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities
FED-STD-595	(Rev C) Colors Used in Government Procurement

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED	(2002; R 2005) Leadership in Energy and Environmental Design(tm) Green Building Rating System for New Construction (LEED-NC)
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U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

29 CFR 1910.1000	Air Contaminants
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29 CFR 1910.1001	Asbestos
29 CFR 1910.1025	Lead
29 CFR 1926.62	Lead

1.3 DEFINITIONS

1.3.1 Terminology is found in Appendix :F.”

1.4 SUBMITTALS

Government acceptance is required for submittals with a "GA" designation; submittals not having a "GA" designation are for Contractor Quality Control approval. The KO designation indicates the submittal requirement requires the Contracting Officers signature for acceptance of the submittal. The PO designation indicates that the Activity’s Planning and Estimating Office requires review of the submittal for recommendation of KO acceptance. When used, a designation following the "GA" designation, i.e. KO and PO, identifies the offices that will review the submittal(s). The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Submit Steel Structures Painting Council standards for the following:

- SSCP-SP-1, Cleaning with Solvent Standard; GA, KO, PO
- SSCP-SP-2, Hand Tool Cleaning Standard; GA, KO, PO
- SSPC VIS 3, Guide and Reference Photographs for Steel Surfaces Prepared by Hand and Power Tool Cleaning; GA, KO, PO

SD-03 Product Data

- Materials; (LEED): Submit documentation for all coatings indicating percentage of post-industrial and post-consumer recycled content per unit of product; GA, KO, PO
- Manufacturer's Technical Data Sheets; (LEED) for the following:
 1. Coatings, indicate VOC; GA, KO, PO
 2. Solvents, indicate VOC; GA, KO, PO

SD-08 Manufacturer's Instructions

- Coatings: Detailed mixing instructions, minimum and maximum application temperature and humidity, potlife, and curing and drying times between coats; GA, KO, PO

- Coatings: Submit manufacturer's Material Safety Data Sheets for coatings, solvents, and other potentially hazardous materials, as defined in FED-STD-313; GA, KO, PO

1.5 DELIVERY, STORAGE, AND HANDLING

1.5.1 Paints shall be in sealed containers that legibly show the contract specification number, designation name, formula or specification number, batch number, color, quantity, date of manufacture, manufacturer's formulation number, manufacturer's directions including any warnings and special precautions, and name and address of manufacturer. Pigmented paints shall be furnished in containers not larger than five-gallons. Paints and thinners shall be stored in accordance with the manufacturer's written directions, and as a minimum, stored off the ground, under cover, with sufficient ventilation to prevent the buildup of flammable vapors, and at temperatures between 4 to 35 degrees C (40 to 95 degrees F). Do not store paint, polyurethane, varnish, or wood stain products with materials that have a high capacity to adsorb VOC emissions. Do not store paint, polyurethane, varnish, or wood stain products in occupied spaces.

1.6 QUALITY ASSURANCE

1.6.1 The QCM shall ensure that a primer coat and two color coats are applied on all paintable components. The QCM shall document on the Contractor's Daily Production Report when the primer coat and two color coats were applied. The QCM shall ensure all materials used conform to the approved submittals and comply with all Federal, Great State of California, and local laws and regulations. The QCM shall ensure that the mandatory MSDS for all materials are on the project site, the MSDS are current and are available to all personnel.

1.7 REGULATORY REQUIREMENTS

1.7.1 Environmental Protection: In addition to requirements specified elsewhere for environmental protection, provide coating materials that conform to the San Diego Air Pollution Control District (APCD) regulations. Notify Contracting Officer of any paint specified herein which fails to conform to San Diego APCD. Do not use products that contain the following:

- a. Lead
- b. Chromate
- c. Asbestos
- d. Mercury
- e. Human Carcinogens: Materials shall not contain ACGIH TLV-BKLT and ACGIH TLV-DOC confirmed human carcinogens (A1) or suspected human carcinogens (A2).

1.7 SAFETY AND HEALTH

1.7.1 Apply coating materials using safety methods and equipment in accordance with the following:

1.7.1.1 Work shall comply with applicable Federal, Great State of California, and local laws and regulations, and with the ACCIDENT PREVENTION PLAN, including the Activity Hazard

Analysis as specified in Section 01 35 26 GOVERNMENT SAFETY REQUIREMENTS and in Appendix A of EM 385-1-1. The Activity Hazard Analysis shall include analyses of the potential impact of painting operations on painting personnel and on others involved in and adjacent to the work zone.

1.7.2 Safety Methods Used During Coating Application: Comply with the requirements of SSPC PA Guide 3.

1.7.3 Toxic Materials: To protect personnel from overexposure to toxic materials, conform to the most stringent guidance of:

- a. The applicable manufacturer's Material Safety Data Sheets (MSDS) or local regulation.
- b. 29 CFR 1910.1000.
- c. ACGIH 0100, threshold limit values.

1.8 ENVIRONMENTAL CONDITIONS

1.8.1 Comply, at minimum, with manufacturer recommendations for space ventilation during and after installation. Notify the Contracting Officer prior to applying high-emission paints or coatings and schedule a time with the facility tenants so that the paint may be applied safely. Isolate area of application from rest of building when applying high-emission paints or coatings.

1.8.1.1 Coatings: Do not apply coating when air or substrate conditions are:

- a. Less than 3 degrees C 5 degrees F above dew point;
- a. Below 10 degrees C (50 degrees F) or over 35 degrees C (95 degrees F), unless specifically pre-approved by the Contracting Officer and the product manufacturer. Under no circumstances shall application conditions exceed manufacturer recommendations.

1.8.2 Do not apply coatings and paint over wet surfaces or when inclement weather is imminent.

1.9 COLOR SELECTION

1.9.1 Colors of the finish coats shall be in accordance with the MCB Camp Pendleton Exterior Architectural Plan (BEAP). The Contractor may obtain an electronic copy of the BEAP from the FSC Office upon request.

PART 2 PRODUCTS

2.1 MPI #6 Primer, Latex for Exterior Wood: A pigmented, white, water borne emulsion type wood primer for exterior wood surfaces. This primer is intended for use in coating systems using both latex and alkyd based finishing paints. Paint systems using this primer will be specified for new and repainting work in commercial and light industrial applications. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

2.2 MPI #11, Latex, Exterior Semi-Gloss (MPI Gloss Level 5): A pigmented, water based, emulsion type, semi-gloss paint for exterior masonry, stucco, primed metals and wood, (primarily trim, fascia and smooth surfaces e.g. doors and door frames) where low to moderate contact can be

anticipated. Alkali resistant for use on masonry surfaces and mildew resistant. This primer is used with MPI #6 for wood surfaces. Not recommended for horizontal surfaces, where water may pond or stand. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

2.3 MPI #25, Cleaner, Etching, for Galvanized Metal: A solution of acid (usually phosphoric) and detergents designed to remove grease and oil residue from metal surfaces and provide a clean, lightly etched surface intended to promote adhesion of subsequently applied coating(s).

2.4 MPI #119, Latex, Exterior, Gloss (MPI Gloss Level 6): A water based, acrylic co-polymer emulsion type, gloss, pigmented coating for exterior primed wood and metal trim, sash, frames and doors. Shall be mildew resistant. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

2.5 MPI #135, Primer, Galvanized, Non-Cementitious: A solvent based, pigmented primer, for interior and exterior galvanized metals, in low humidity conditions. This primer is intended for use in coating systems that use both latex and alkyd based finishing paints. Paint systems using this primer will be specified for new and repainting work in commercial and light industrial applications. Application includes use of brushes, rollers, and airless and conventional spray equipment

PART 3 EXECUTION

3.1 PROTECTION OF AREAS AND SPACES

3.1.1 Prior to surface preparation and coating applications:

3.1.1.1 Protect unpainted surfaces, lawns, shrubbery, and adjacent surfaces against paint and damage. Repair damage resulting from inadequate protection.

3.1.1.2 Furnish drop cloths, shields, and protective equipment to prevent overspray and splatter from damaging surfaces not being painted.

3.1.1.3 Protect all surfaces, equipment, and fixtures from damage resulting from used of fixed and movable scaffold, personnel lifts, planking and staging. Repair damage resulting from inadequate protection.

3.2 SURFACE PREPARATION

3.2.1 All surfaces to receive paint shall be clean, dry, smooth, and dust and rust free.

3.2.2 Remove mildew from affected surfaces with a solution of Tri-Sodium Phosphate and bleach. Rinse with clean water and allow to dry completely.

3.2.3 Remove grease, rust, mill, scale, dirt, and dust from galvanized, ferrous, and aluminum metal surfaces. Etch galvanized metal. Primer coat shall be applied not less than 30 minutes, nor more than 3 hours after surface preparation.

3.2.4 Hand sand and scrape metal to remove loose primer and rust. Feather the edges to make touch up patches inconspicuous. Touch up bare, abraded, and damaged areas with the approved metal primer.

3.2.5 Remove dust, grit, and foreign matter from wood surfaces. Sand surfaces and dust clean. Spot prime knots, pitch streaks and sappy sections with a stain blocking primer. Fill nail holes, cracks, and other defects in the wood prior to applying primer. Apply primer after the patching material has completely dried.

3.2.6 Existing adjacent surfaces next to the replaced or repair area shall be thoroughly cleaned and de-glossed by sanding or by other means prior to priming and painting. Patched and bare areas shall be spot primed with the same primer as specified for new work.

3.2.7 Apply sealant prior to application of color coats.

3.3 APPLICATION

3.3.1 Do not thin paint without the approval of the Contracting Officer. Do not tint primer with a color coat.

3.3.2 Wood Surfaces

3.3.2.1 Apply one coat of primer and two color coats on all newly installed roofing components and on repaired or replaced exposed wood surfaces, to include adjacent surfaces.

3.3.2.2 All applications of etchings, primers, and coatings shall be performed in accordance with the manufacturer's application instructions.

3.3.2.3 Do not apply coatings until the moisture content of the surface is within the limitations recommended by the paint manufacturer.

3.3.2.4 Apply primer and paint to roofing components and exposed wood repaired or replaced components by means of brushing or rolling.

3.3.2.5 All coatings shall be applied to provide a smooth uniform surface, without runs, sags, skips, holidays or other defects.

3.3.2.6 Surfaces shall be dusted and cleaned between coats.

3.3.2.7 Back prime all wood unexposed surfaces prior to being installed against concrete, masonry, or plaster.

3.3.2.8 Allow each coat to dry completely before applying the succeeding coat.

3.3.3 New or Existing Galvanized Surfaces: Clean new or existing galvanized surfaces with that has dirt and zinc oxidation on the surface with solvent in accordance with SSPC SP 1. Hand clean in accordance with SSPC SP 2. As a visual reference, cleaned surfaces shall be similar to photographs in SSPC VIS 3.

3.3.40. Existing Surfaces with a Bituminous or Mastic-Type Coating: Remove chalk, mildew, and other loose material by washing with a solution of 0.20 liter (1/2 cup) trisodium phosphate, 0.1 liter (1/4 cup) household detergent, 1.6 liters (one quart) of 5 percent sodium hypochlorite solution and 4.8 liters (3 quarts) of warm water.

3.4 CLEANUP

3.4.1 Touch up and repair all damaged and defaced surfaces prior to conducting the “Final Acceptance Inspection.”

3.4.2 Remove spillage paint adjacent from surfaces, to include horizontal and vertical surfaces. Spillage paint is any paint that has been dripped upon, spilled upon, sprayed upon, painted upon or spattered upon as a direct result of the painting applications.

-- End of Section --

ATTACHMENT J-2.1.1
CAMP PENDLETON REQUIREMENTS

Provided as a separate attachment on the Federal Business Opportunities website at
<http://www.fbo.gov>

ATTACHMENT J-2.1.2

CAMP PENDLETON BASE EXTERIOR ARCHITECTURAL PLAN

Provided as a separate attachment on the Federal Business Opportunities website at
<http://www.fbo.gov>

ATTACHMENT J-2.1.3

NAVAL WEAPONS STATION SEAL BEACH, FALLBROOK DETACHMENT, CA REQUIREMENTS

1. All employees shall be U.S. citizens, nationals or aliens authorized to work in the United States. To comply with the law, you shall verify the identity and employment eligibility of anyone you hire or have hired since November 7, 1986, and complete and retain an "Employment Eligibility Verification" (DHS Form 1-9). On-site verification of your employee's 1-9 forms and supporting documentation is required prior to issuance of ID badges.
2. Request for employee badges shall be on company letterhead and signed by an authorized individual. Requests shall include the employee's name, Social Security number, date and place of birth and a certificate from the signing official that (1) the employee is a U.S. citizen and (2) the employee's U.S. citizenship has been verified.
3. All correspondence requesting badges or vehicle passes shall be submitted to the designated ROICC or Public Works representative, as applicable, prior to any badge or pass being issued.
4. Each employee is required to present positive personal identification (state driver's license is preferred) before a badge can be issued.
5. Employees shall wear station ID badges at all times while aboard the Detachment.
6. An employee shall present a valid driver's and current vehicle registration before a vehicle pass can be issued.
7. All vehicles operated aboard the Detachment are subject to search. Administrative vehicle inspections are conducted frequently.
8. When stopped for vehicle inspection, employees shall be prepared to present their valid driver's license and vehicle registration.
9. Speed limits are posted and traffic citations will be issued to violators.
10. All citations issued are adjudicated by a Federal Magistrate.
11. Drivers should be especially cautious in magazine areas and should be aware of explosive-laden trucks in the vicinity.
12. Weapons of any kind are prohibited on station.
13. Personal pets are prohibited on station.
14. Smoking in vehicles anywhere aboard the station is prohibited. Smoking is permitted in designated areas only.
15. Mobile communications equipment (cellular phones, CB radios, etc.) may not be used without written authorization from the Safety Department. Drivers will not use cell/mobile phones unless the vehicle is safely parked or unless they are using a hands-free device.
16. Cameras (still, motion picture or video) or any devices capable of recording images for personal use are prohibited on station. Cameras for official photography shall have a Camera Permit obtained through the Pass and ID Office.
17. Weekend or out-of-hours work requires at least two days prior written notice to Security.
18. If work will require a road closure(s) or power outage, notify Security in advance.
19. In the event of an emergency (accident, injury, fire, etc..) medical and fire department personnel be reached by dialing 911.

- 20 Employees who encounter any suspected illegal aliens should call Naval Force Command Post (ext. 1-3696) if possible.
- 21 Any other security related questions should be directed to the Security Department Pass and ID Office at (760) 731-3672 during duty hours (7:30 am to 3:30 pm, Monday through Friday) or to the Command Post at (760) 731-3696 after duty hours, on weekends, and holidays.

<p>SAFETY REGULATIONS NAVAL WEAPONS STATION SEAL BEACH FALLBROOK DETACHMENT</p>

All work performed under this contract shall comply with the following Detachment safety requirements and other applicable regulations.

1. Combustible waste material such as rags, paper, cardboard boxes and wood shall be disposed of in Contractor furnished covered metal containers marked, "WASTE MATERIALS".
2. Contaminated rags and waste shall be deposited in Contractor furnished, self closing safety containers marked, in accordance with applicable federal, state, and local laws and regulations.
3. All scrap and waste containers shall be removed from the work site at the end of each work day or when they become full, whichever occurs first.
4. All solvents/flammable material shall be stored in Contractor furnished self closing containers. These containers shall be marked in accordance with federal, state, and local laws and regulations as to their contents.
5. The use of any radio transmitting device is prohibited on the Detachment.
6. The use of equipment operated by or utilizing propane, butane, or LPG gas is prohibited in the explosives area and shall be approved by the Detachment Safety Department prior to the start of work in all other areas. No work shall be accomplished while buildings contain explosives.
7. Smoking in vehicles is prohibited; however, smoking is permitted in designated areas.
8. Job site shall be kept clean and orderly at all times.
9. A permit issued and signed by the Detachment Fire and Safety Departments shall be obtained prior to any welding or hot work.
10. Detachment Safety Department personnel are authorized to stop Contractor work where an imminent hazard exists. All other Contractor violations shall be reported to the Contracting Officer.
11. During the accomplishment of this contract, Detachment explosive operations may preclude Contractor progress in specific buildings and areas. In the event of an interruption of the Contractor's work due to explosive operation limitations, a corresponding extension of contract completion date or Task Order will be issued.
12. For Contractor personnel protection when noise emissions from Contractor installed equipment or machinery exceeds 84 dBA, the Contractor shall either reduce the noise level below 84 dBA or provide ear protection to operators and post signs to notify personnel they are entering a noise hazardous area. Noise emission from Contractor installed equipment or machinery shall not exceed the 60 dBA "nuisance" level into the surrounding area.
13. The Contractor shall be responsible for the reporting of any accident or injury to Contractor personnel or equipment in accordance with OSHA requirements.
14. The Contractor shall obtain a station spray permit from Safety, Building 1, per each occurrence, and fill out as required 24 hours prior to application of any herbicides/pesticides, or any chemical applications.

ATTACHMENT J-2.1.4

MARINE CORPS BASE CAMP PENDLETON MAP



APPROXIMATE DISTANCES FROM MAIN GATE

11-17 AREA.....	11 MILES
21 AREA.....	1 MILE
22-24 AREA.....	8 MILES
25 & 33 AREA.....	10 MILES
31 & 32 AREA.....	5 MILES
43 AREA.....	13 MILES
51 AREA.....	22 MILES
52 AREA.....	17 MILES
53 AREA.....	19 MILES
62-64 AREA.....	27 MILES

SECTION J-3

**MARINE CORPS AIR STATION MIRAMAR AND MARINE CORPS RECRUIT DEPOT
SAN DIEGO, CA**

SECTION J-3.1

MARINE CORPS AIR STATION MIRAMAR SPECIAL REQUIREMENTS



MARINE CORPS AIR STATION

MIRAMAR REQUIREMENTS

**SPECIFIC FACILITIES CONSTRUCTION
REQUIREMENTS**

MCAS MIRAMAR REQUIREMENTS

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APPENDIX A. ACRONYMS

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DIVISION 01 - GENERAL REQUIREMENTS

UFGS 01 78 24.05 20 - Facility Electronic Operation and Maintenance Support Information (eOMSI)

1. Submittal Requirements – Final Submittal.

- a. Provide two hard copies and four sets of electronically (single document .PDF) formatted information to the Contracting Officer 30 days prior to the Beneficial Occupancy Date (BOD). Electronic .PDF OMSI/O&M Manuals are to be formatted to match the hard copies.

DIVISION 08 - OPENINGS

UFGS 08 71 00 - Door Hardware

1. Cylinders and Cores.
 - a. All door hardware locksets and padlocks, other than special electronic/card key/etc., will have the following characteristics:
 - i. Best Interchangeable (Best/Schlag/Falcon/etc.).
 - ii. 7 Pin core.

DIVISION 21 - FIRE SUPPRESSION

UFGS 21 12 00 - Standpipe Systems

UFGS 21 13 00.00 20 - Wet-Pipe Fire Suppression Sprinklers

UFGS 21 13 00.00 40 - Fire Suppression Sprinklers Systems

1. Risers.
 - a. Provide “Rocket” type Risers (i.e. a riser without trim, alarm check valve with trim, or water motor gong).
2. Fire Sprinkler Control Valves.
 - a. Fire sprinkler control valves shall not have tamper switches. These valves are to be in the open position and secured with a chain and lock, provided by the contractor. The lock type/characteristics shall be specified by the Authority Having Jurisdiction (AHJ) – MCAS Miramar Fire Department.
3. Fire Department Connection (FDC).
 - a. The FDC is to be located facing the nearest street or fire lane.
4. Wet Pipe Fire Suppression Sprinklers
 - a. The following information must be indicated on the fire protection drawings:
 - i. Location and detail of each sprinkler system supply riser, fire department inlet connection, pressure or flow switch, fire inspector test, and fused disconnect switch an associated electrical connections.
 - ii. Location where each sprinkler system begins including connection to water distribution system piping.
 - iii. Location of sprinkler system control valves, post indicator valves, or wall indicator valves.
 - iv. Areas of sprinkler system coverage when system is protecting partial areas.
 - v. Details of anchoring piping, including pipe clamps and tie rods or mechanical retainer glands. Provide details of seismic anchorage.
 - vi. Indicate existing sprinkler piping layout and sprinkler heads on project drawings only if existing sprinkler system is being modified and such layout is necessary for clarity.

vii. A-E is responsible for conducting fire flow testing (if required). However, a MCAS Fire Department Fire Inspector must witness the flow test.

5. Hydrants and Back Flow Preventers

- a. Hydrants shall be located to provide hose layouts not to exceed 350 feet in all directions. Hydrants shall be spaced at intervals of not more than 500 feet along street, driveway, or designated fire lane.
- b. Guard post barriers (bollards) set in concrete (4" diameter with 3 feet both above and below ground and filled with concrete) shall be provided where there is no curb, and shall not obstruct access to pumper discharge outlets.
- c. Hydrants shall be located between three and seven feet from the curb or road edge. A minimum 3-foot radius unobstructed working area shall be provided around each hydrant.
- d. Hydrant finishes shall be painted Safety Yellow and painted to indicate the GPM measured in accordance with NFPA 24. Hydrants shall be tested in accordance with NFPA 291.
- e. Valve boxes for underground hydrant shutoff valves shall be in a cast-iron valve box, located with 10 feet of the hydrant being controlled, and shall not be obstructed by parked vehicles, shrubbery, etc. Provide 2'x2'x6" concrete slab around valve box covers. Valve box covers shall be painted blue.
- f. A water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material accumulates. There shall be no delay in the installation of fire protection equipment. (Reference NFPA 241 6-7.2.1). Where underground water mains and fire hydrants are to be provided, they shall be installed, completed, and in service prior to construction work. (Reference NFPA 241 6-7.2.2).
- g. All new fire hydrants shall be set back at least 40 feet from adjacent buildings.
- h. Fire hydrant pumper connections shall be oriented perpendicular to adjacent access roadways.
- i. Install two-way blue Stimson Sonite Lifelite 88a13 or equal markers. Install the Hydrant "Blue Dots" in the center of the roadway, offset toward the side of the street where the hydrant is located.
- j. Backflow preventers supplied by a fire sprinkler system with a fire department connection shall be provided with a double check valve type backflow preventer.

6. Other Special Construction

- a. Fire Wall Identification: Identify all fire rated walls with signs stating the following: "Fire Wall Do Not Penetrate", above drop ceilings at 10-foot intervals. For aesthetic reasons, this requirement does not apply to walls inside stairwells or public areas such as offices, lobbies, corridors, etc that do not have drop ceilings. In mechanical, electrical and other similar rooms, place signs at 8-feet above finished floor level. Space signs at a maximum of 10-foot intervals. In rooms with raised flooring, place signs on fire walls under the floor with spacing of signage reduced to 5 foot intervals. Apply signs using florescent red or orange paint over stencils. Letters must be a minimum of 4-inches in height. Do not use metal, plastic or paper decals.
- b. Fire Extinguishers:
 - i. Provide "Sentry Ansul" portable fire extinguishers in recessed or semi-recessed cabinets (if wall construction allows this type of mounting).
 - ii. Fire extinguishers shall be of the size and rating appropriate to the hazard.
 - iii. Mess halls and commercial cooking facilities shall be protected with Class "K" wet chemical type fire extinguishers.

DIVISION 27 - COMMUNICATIONS

UFGS 27 10 00 - Building Telecommunications Cabling System

1. Telecommunication Systems and Equipment.

- a. **Telecommunications Room (TR) Sizing:** The TRs shall be sized IAW TIA/EIA-569-B for all new construction projects with a primarily administrative function. (Small, mixed-use facilities shall not require full compliance with TIA/EIA-569-B.) Generally, the TR shall be sized to approximately 1.1 percent of the area it serves. For example, a 10,000-square foot (1,000-square meter) area shall be served by a minimum of one 11-foot x 10-foot (3.4 m x 3 m) TR. Facilities with requirements exceeding those of the average administrative building (i.e., C2 facilities, etc.) will require TRs sized to approximately two percent or more of the area served.

Large floor areas shall be divided into “serving areas” with TRs for each serving area. Each serving area can be no larger than 10,000 square feet (1,000 square m) as stipulated in TIA/EIA-569-B. The TR sizing allowances shall be made only in cases of construction projects involving building renovation, and under most circumstances a TR shall not be smaller than 10 feet x 8 feet (3 m x 2.2 m). The designer shall avoid irregular-sized TRs, such as narrow rooms or odd shapes. TRs shall not contain windows. Adequate space shall be provided in TRs to facilitate tenant-owned telecommunications system support equipment requirements in tenant-installed freestanding cabinets or racks. Total TR space (as a percentage of the building’s area) shall be scaled upward to reflect the increased number of circuits in buildings with more than the standard number of circuits to each workspace. Smaller building TRs are covered in TIA/EIA-569-B.

- b. **Range Considerations:** In multi-story buildings, a minimum of one TR shall be located on each floor. Small facilities, i.e., air traffic control towers, firing range towers, etc., may use one TR for the entire facility. TRs on successive floors shall be vertically stacked wherever possible. A minimum of three 4- inch rigid conduits shall be installed between stacked closets on successive floors, IAW EIA/TIA-569-B.
- c. **Room Interior Finishes:** Floors, walls, and ceilings shall be treated to eliminate dust. Finishes shall be light in color to enhance room lighting. Dropped ceilings shall not be installed in TRs.
- d. **Room Door:** The TR doors shall be a minimum of 36 in (1 m) wide, 80 in (2 m) tall, without doorsill or windows, hinged to open outward and shall be fitted with a lock (A161 key core) to control access to the room. Doors shall open to the inside of the building served, except when strict controlled access is required.
- e. **Room Location:** The TRs shall be dedicated spaces not shared with other functions (i.e., electrical rooms, mechanical rooms, etc.). The TRs shall be located centrally in the area which they serve. The TRs shall be located in such a manner that the maximum copper cable distance from the patch panel through the structured cabling system to the furthest outlet does not exceed 295 feet. In rehabilitation projects, rooms containing transformers, air handling units, etc., shall be avoided if at all possible. If shared facilities cannot be avoided, ensure that proper electrical/telecommunications cable separations are maintained per the National Electrical Safety Code (NESC) and the National Electrical Code (NEC).
- f. **Multi-story Buildings:** In multi-story buildings, a minimum of one TR shall be located on each floor.
- g. **Telephone Backboards:** A minimum of two walls shall be covered with rigidly-fixed, ¾-in (20 mm) A-C plywood, preferably void-free, 8 feet (2440 mm) high, capable of supporting attached equipment. Plywood shall be fire-rated. Fire-rated backboards are TIA/EIA approved and are easier to field verify than fire-retardant paint. When renovating an existing TR that does not have adequate space, the backboard shall be sized as large as possible to accommodate the PET and 110-type blocks.
- h. **Equipment Racks:** Equipment racks (Zone 4) shall be floor-mounted, 84 in (2100 mm) high and 19 in (475 mm) wide located at or near the center of the TR. Equipment racks are normally 7 feet (2.1 m) high but may be adjusted for special conditions. If mounting requirements for oversized equipment are anticipated, 23 inches (580 mm) may be substituted. In narrow or crowded TRs, equipment racks may be floor-mounted adjacent to a wall but shall provide a minimum 36 inches (900 mm) of space both in front of and behind the rack and behind any installed equipment. A minimum side clearance of 24 inches (600 mm) shall be provided on end racks. Provide 100 percent spare rack capacity based on the amount of rack capacity utilized by the patch panels

provided. Spare racks shall be provided for the mounting of Government- purchased and -installed Local Area Network (LAN) equipment. Wall-mounted racks may be utilized in small buildings or for small systems. Racks will be bolted to floor, and two walls resulting in three points of connection.

- i. **Unshielded Twisted Pair (UTP) Patch Panels:** The UTP patch panels shall be installed in, or adjacent to, the equipment racks or cabinets which will house LAN equipment. Patch panels shall consist of eight-position modular jacks with rear-mounted, type 110 insulation displacement connectors, category- rated for the UTP system being installed and arranged in rows or columns on 19-inch (475 mm) rack- mounted panels. Nineteen-inch (475 mm) wall-mounted panels may be utilized when necessary. The jack pin/pair configuration shall be T568B per ANSI/TIA/EIA-568-B. The modular jacks shall conform to the requirements of ANSI/TIA/EIA-568-B and shall be rated for use with the installed cable plant. Provide a minimum spare capacity of 10 percent in the installed patch panels.
- j. **Fiber Optic Patch Panels (FOPP):** Fiber Optic Patch Panels shall be installed in, or adjacent to, the equipment racks or cabinets which will house LAN equipment. Patch panel connectors and couplers shall be the same type and configuration as those used elsewhere in the system. Utilize 568SC duplex connectors on 19-inch (475 mm) rack-mounted panels unless otherwise directed. Twenty-three-inch (580-mm) rack-mounted panels or minimum 12x10-in (300x250-mm) wall-mounted enclosures may be utilized when necessary. A 3-foot (1-meter) slack loop of fiber shall be provided within each panel, and panels shall provide strain relief for cables. Patch panels shall properly provide termination, splice storage, routing, radius limiting, cable fastening, storage, and cross-connection. Provide a minimum spare capacity of 10 percent in the installed patch panels. Single-mode and multi-mode fiber optic cables shall be terminated on separate fiber optic patch panels.
- k. **Ladder, Wire Cable Tray, and Fiber Wire Way:** Ladder type or welded wire cable tray shall be used in the TR to provide distribution between the telephone backboard, equipment racks, backbone conduits, and the distribution cable tray. All metallic cable tray sections will be bonded, and the cable tray system will be grounded to the TMG or TMGB. Plastic or composite wire ways designed for fiber optic cables are permissible for the fiber optic system. Copper cabling shall not be installed in any dedicated fiber optic support systems.
- l. **Room Lighting:** Light fixtures shall be mounted a minimum of 9 feet (3 meters) above the finished floor and shall provide a minimum of 50 foot candles (500 lx) of illumination measured 3 feet (1 meter) above the finished floor.
- m. **Heating Ventilation Air Conditioning (HVAC):** Each TR shall be independently climate-controlled (air conditioning/cooling-heating system), capable of providing year-round ambient temperature control (24 hours/day, 365 days/year) to protect all installed electronic equipment in accordance with TIA-569-B-1. The independent climate-control system shall be connected to the building emergency power system. Rooms shall be provided with positive atmospheric pressure to exclude dust. The designer shall consult with the mechanical designer or facilities engineer if the TR is to house blade servers, PoE, or large numbers of network switches. These devices can generate a considerable amount of heat; therefore, the mechanical designer may have to compensate for these additional loads. TRs shall not contain windows, as windows may increase heat load.
- n. **Room Contaminants:** Information system equipment shall not be installed in spaces where moisture, liquid or gaseous spillage, or other contaminants may be present.
- o. **Electrical Power:** Provide a dedicated electrical panel for each TR with the following minimal requirements: 120/208 volt (V), 3-phase, 30-space panel with a minimum 100-Ampere (A) total capacity. All loads within the TR shall be fed from the dedicated TR panel and not from other branch circuits. Loads shall include, but are not limited to, receptacles, servers, UPS, data switches, and HVAC systems (including exterior units for split systems). A minimum of 30A spare capacity shall be reserved in each TR panel with a minimum of four unused spaces for future loads. In accordance with TIA/EIA-569-B, lighting fixtures should not be powered from the TR's electrical panel. Additional 110V, 20A duplex convenience receptacles shall be provided at 6 feet (1800mm) intervals around the perimeter walls of the TR. For all projects, provide a dedicated power circuit and receptacle for each 19 inch (480 mm) rack or cabinet. These receptacles shall be installed on the bottom of or immediately adjacent to racks or cabinets to avoid equipment power cords from being placed across the TR floor. The designer shall consult with the facilities engineer to determine the necessary power requirements since the rack or cabinet may contain devices requiring 110V and/or 220V circuits. Stackable type data switches serving smaller user populations users may only require 110V, 20A circuits, while

blade servers, PoE switches, or larger network switches may require multiple 110V circuits or 220V circuits. If there is a SIPRNET room adjacent to a TR, the TR's electrical panel shall also be used and sized for all circuit requirements for the operation of the SIPRNET room. Design note for renovations: The designer shall specify a disconnecting means as defined in the National Electrical Code, Article 645.10, if the existing panel is not collocated or in close proximity to the branch-circuit power panel. **Note: All HVAC units and UPS circuits must be tied into the building generator if a generator exists for the building.**

- p. **Voice Communications:** Each TR shall have one wall-outlet installed at or near the entry door for emergency or voice communications.
- q. **Grounding:** All unclassified TRs shall be connected to the building earth electrode subsystem (EES) An acceptable grounding system encompasses fault protection grounds, lightning protection grounds, signal reference grounds, and direct current (DC) power grounds (when applicable) for proper lightning protection and to NFPA 70 for proper fault protection grounding. The telecommunications designer shall review the project drawing(s) to ensure that the lightning and fault protection grounds are addressed by the appropriate disciplines. The telecommunications designer shall ensure that the different grounding systems are not mixed within the building.
- r. **Cable Entrance Grounding:** All metallic shields and strength members for OSP cable entering a building shall be connected to the lightning protection ground system. The designer shall ensure that the lightning protection is IAW MIL-STD-188-124-B and NFPA 780, *Standard for the Installation of Lightning Protection Systems*, current issue.
- s. **Copper Cable Entrance:** The OSP copper cable shield, armor, and metallic strength member shall be bonded to the Lightning Protection Subsystem as close to the building's point of entrance as possible with a No. 6 AWG or larger ground wire IAW NFPA 70 800.100. The designer shall use a non-bonded splice case for the transition from OSP rated cable to interior rated cable or shall indicate that the implementer shall not install the splice case carry-through bonding conductor. If the designer extends the OSP copper cable past 50 feet (15 m) IAW NFPA 70 Section 800.113, the metallic strength member shall be bonded to the lightning protection ground with a No. 6 AWG or larger copper ground wire, as close to the conduit egress point as possible.
- t. **Copper Protector Block:** All OSP copper cables shall be terminated on primary protector blocks equipped with 5-pin solid state or gas protector modules. The protector blocks shall be bonded to the lightning protection ground with a No. 6 AWG or larger copper ground wire. Terminals and hardware shall be UL-listed, made of a flame-retardant construction, and equipped with a built-in splice chamber; 5-pin gas protector modules; locking cover; and output on 110 blocks, or RJ21 connectors.
- u. **Fiber Cable Entrance:** The OSP FOC armor and metallic strength member shall be bonded to the Lightning Protection Subsystem as close to the building's point of entrance as possible with a No. 6 AWG or larger ground wire. The designer shall use a non-bonded splice case for the transition from OSP rated cable to interior rated cable or shall indicate that the implementer shall not install the splice case carry-through bonding conductor. If the designer extends the OSP fiber cable past 50 feet IAW NFPA 70 Section 770.113, the metallic strength member shall be bonded to the lightning protection ground as close to the conduit egress point as possible with a No. 6 AWG or larger copper ground wire. If inside/outside cable is used, a cable shield isolation gap shall be incorporated.
- v. **Copper Outlet/Connector:** Copper outlets/connectors shall be TIA/EIA CAT6 for all projects. All connectors shall be 8-pin/8-position insulation displacement terminations wired as per T568B. **Category 5-, CAT5e-, and CAT3-rated connectors shall not be used in new construction or in rehabilitation projects.** The copper outlet/connector and plugs shall be un-keyed unless (1) the user requires a keyed outlet/connector and plugs to maintain system uniformity, security, or (2) there are other user-specified reasons.
- w. **FO Outlet/Connector:** Terminate all FO work area cables in dual 568SC connectors. The default choice for the FO outlet/connector shall be TIA/EIA "SC". Other type connectors (small-form-factor) may be substituted as required by the user. Small form factor connectors (available from several manufacturers) offer a potential for significant installation cost reduction. Any type of fiber connector used shall meet the performance requirements specified within Annex A of TIA/EIA-568-C.3 and shall meet the requirements of the corresponding TIA FO Connector Intermateability Standard (FOCIS) document.
- x. **Outlet/Connector Markings:** Each communications outlet shall have a unique identifying number IAW TIA/EIA 606-A. In the TR, this unique identifying number shall be associated with the position on the patch

panel/cross-connect to which the outlet is connected. Each horizontal cable shall be labeled both at the outlet and patch panel or cross-connect position in the TR. Connector voice and data dedication use may be reassigned as requirements dictate. **Note:** In the standard cabling scheme, the designations “voice” and “data” are arbitrary and do not imply that one outlet is better than the other; the outlets are identical in capability.

- y. **Outlet Types and Density:** Outlet densities are provided for planning purposes, when actual outlet locations are not known and cannot be determined with available information. The designer can develop reasonably accurate total outlet count estimates based on the size and dedicated usage of the space. Actual designs shall include outlets in work areas, office automation outlets, private office outlets, and wall or access phones as necessary. Private (fixed wall) offices or areas where it would prove difficult to add telecommunications outlets at a later date shall have a minimum of two (2) dual outlets on different walls to accommodate furniture layouts. These factors fall within the ranges given in TIA/EIA-569-B and are based on gross area (overall building footprint without deducting for equipment rooms, restrooms, etc.).
- z. **Utility Rooms and Closets:** All utility rooms and closets, such as electrical, mechanical, and telecommunications, shall be wired with at least one wall-mounted telecommunications outlet with a mounting lug faceplate to accommodate wall-mounted phones.
- aa. **Elevators:** In buildings with elevators, a four-pair copper cable with an eight-position modular outlet adapter shall be installed for each elevator. The exact location of the outlet assembly shall be verified with the elevator installer or contractor.
- ab. **Building Telecommunications Wiring:** The following information pertains to horizontal cable and backbone cable. All horizontal and backbone wiring shall be designed in a star-configuration as defined in TIA/EIA-568-B.1. All cables shall be terminated within TRs, Telecommunications Equipment Rooms (TERs), and work areas.
- ac. **Copper Voice and Data:** For general projects, **FOUR CAT6. UTP cable shall be installed to each standard 8-pin modular connector provisioned at the outlet.** For example, four 4-pair UTP cables shall be installed to a standard administrative. Copper cables shall not be split between multiple modular connectors. Only cable that has passed the Underwriters Laboratory (UL) LAN certification program and is labeled with UL-acceptable markings shall be used. Plenum cables shall be provided IAW National Fire Protection Association, Inc. (NFPA) 70, or as required by the facility safety officer or local building code. Terminations shall be provided IAW the paragraph entitled “Copper Termination” in this TG. **The designer shall not use 150 ohm shielded twisted pair for new construction. CAT5-, CAT5e-, and CAT3-rated cable shall not be used in new construction or rehabilitation projects.** A minimum of 3 m (10 feet) of cable slack shall be provided at the TR/TER and 1 m (3.28 feet) in the suspended ceiling for the telecommunications outlets. Service loops are not allowed for CAT6 cabling; slack shall be stored above the accessible ceiling in its natural lay, or in the cable tray.
 - i. Copper Termination: Terminations shall be performed using an 8-pin (RJ45 type) connector, rated for the category of the installed cable (CAT6). In the standard cabling scheme, horizontal cables are arbitrarily designated “voice” and “data” to identify and differentiate their purpose. This designation in no way indicates a difference in the capability of the cable. Copper distribution cable shall be terminated at the TR on insulation displacement cabinet or rack-mounted patch panels compliant with CAT6 for general projects. Very small projects (i.e., fewer than ten users) may use a TIA/EIA category-qualified block or backboard-mounted patch panel. Cables from the same outlet shall be terminated in the same equipment rack or 110 Block either the same or separate patch panels/110 Block and shall be individually identified. All terminations shall be wired to the TIA/EIA T568 B configuration. Copper cables shall not be split between multiple modular connectors.
 - ii. FO Patch Cables: Fiber optic patch cables shall use the same type of FOC and connectors as the patch panels they are interconnecting. Utilize duplex patch cables for all patch panels. Provide sufficient FO patch cables, plus 25 percent spare, of various appropriate lengths, to terminate all fiber optic patch panel (FOPP) appearances.

- iii. Unclassified Internet Protocol Router Network (NIPRNET) cabling will be blue or grey in color. No other colors will be substituted. Secret Internet Protocol Router Network (SIPRNET) cabling will be red in color. No other colors will be substituted.

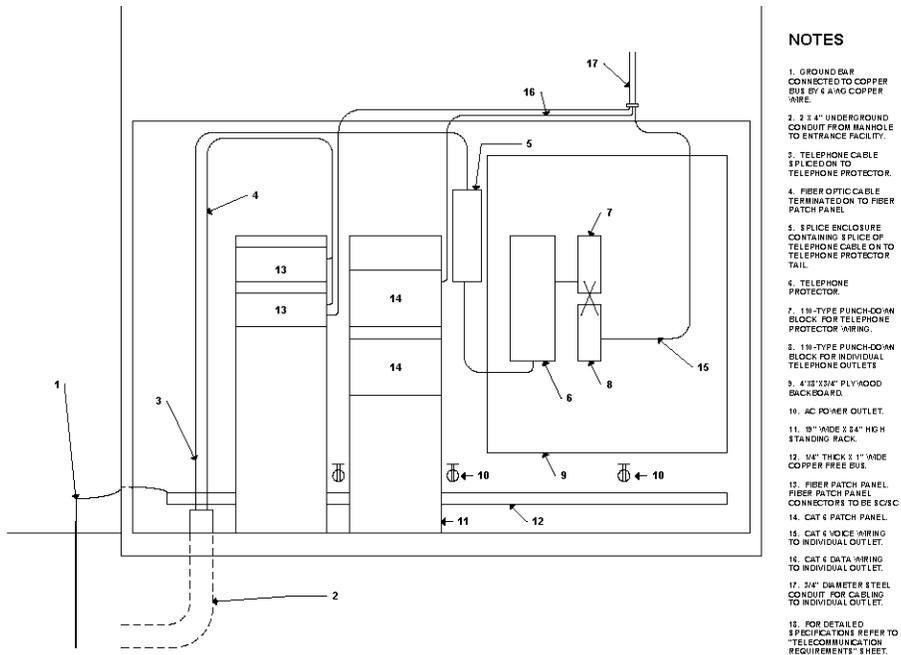
- ad **Cable Length:** Copper data cable length shall be limited to 295 feet (90 m) from patch panel termination in the TR to the data outlet termination IAW TIA/EIA-568-C.1. The linear footage between the TR and the outlet should not exceed 250 feet, as this will allow for all horizontal cabling to be within the 295-foot tested length. The average cable length, i.e., average measured length, shall be adjusted for planning purposes as required. Exception: Buildings with collapsed backbones that use FOC for all data and use copper UTP for voice-only may exceed the 295-foot length.
- ae **Copper Backbone Cable:** Multi-pair voice backbone cable shall meet the requirements of Insulated Cable Engineers Association (ICEA) S-80-576 and TIA/EIA-568-B.2 for riser-rated UTP cable. Conductors shall be solid untinned copper, 24 AWG, with a nominal characteristic impedance of 100 ohms. The copper backbone cable originating in the main TR or main cross-connect shall be terminated in each TR on 110-type, insulation-displacement wiring blocks mounted on the telephone backboard. As a minimum, two backbone cable pairs for each outlet connected to the TR served by the backbone cable shall be provided.
- af **Copper Termination:** Termination shall be performed using 110-type connectors, rated for the installed cable. All terminations shall be wired IAW TIA/EIA T568 B. Twisted pair outside plant (OSP) cable is terminated on the Protected Entrance Terminal (PET). Cross-connects can then be placed from the PET to the first set of 110-type terminal blocks as needed. The first set of terminal blocks provides connection for all backbones and for outlets served by the main TR. For main TRs that contain a telephone distribution frame, the horizontal main distribution frame (MDF) blocks shall serve as the main cross- connects. Post backbone communications nodes shall have an MDF for copper OSP cabling. For larger buildings with over 1200 pair copper, consider the use of an MDF frame. For example, in a three-floor building, one backbone cable shall be terminated on 110-type blocks on the same backboard as the PET; one backbone cable shall be terminated on 110-type blocks in the second floor TR; and one backbone cable shall be terminated on 110-type blocks in the third floor TR. A backbone cable connects a second set of 110-type blocks in each TR to a rack-mounted, 8-pin (RJ45 type) connector voice patch panel. This panel can be patched to the distribution patch panel which, in turn, terminates the CAT6 outlet wiring. Cross-connects can be installed by NEC/telephone personnel, and jumpers can be installed by the user/Information Mission Area (IMA) department, providing the desired connectivity between the OSP and the inside plant wiring. This design allows maximum flexibility for future moves, additions, and changes.
- ag **FO Backbone Cable:** For all projects, a minimum of 12 strands single mode FOC and 12 strands of multi mode FOC shall be installed between the main TR or main cross-connect and each TR. Backbone fibers shall be fusion-spliced to factory-produced pigtailed.
- ah **Pull Boxes:** Pull boxes shall be placed in conduit runs where a continuous conduit length exceeds 100 feet or where there are more than two 90-degree bends. Pull boxes shall be placed in straight runs of conduit and shall not be used in lieu of a bend.
- ai **Non-continuous Cable Supports:** Provide suitable supports that provide a continuous accessible pathway for cables not supported by conduit or cable tray. Non-continuous cable supports shall not be used in place of the cable tray system. Non-continuous cable supports (J-hooks, etc.) shall be specifically designed to support category-rated cabling. Supports shall not exceed 20 cables or 50 percent of the fill capacity, whichever is less. Spacing between supports shall not exceed five feet.
- aj **Small Facilities and Renovations:** In new construction involving small, mixed-use (non-administrative) facilities, or in construction projects involving renovation of existing buildings, the use of “J” hooks, flexible cable trays, and alternative support systems specifically certified for CAT6 cable is permissible. All alternative telecommunications supporting structures shall be TIA/EIA-569-B-compliant and shall be designed and installed in accordance with TIA/EIA-569-B, NECA/BICSI 568, and the manufacturers’ specifications. Alternative support systems shall not exceed a 50 percent fill ratio. “J” hooks shall not exceed 20 cables or 50 percent of the fill capacity, whichever is less. Surface-mounted, non-metallic raceway may be used in renovation projects where access to the walls for installation of conduit and outlet boxes is not possible or where historical requirements prohibit the alteration of the building structure.

ak **Outlet/Patch Panel Labels:** The telecommunications systems labeling shall be IAW TIA/EIA-606-A. All outlets and patch panel positions shall be labeled as to their function and with a unique identifier code. All devices, outlet locations, and designations shall also appear on the system drawings. As a minimum, the following shall be reflected in the outlet/patch panel labeling:

Outlet Security level (if applicable) Building
Room number
Alpha or numeric designator
V/voice
D/data

Labeling shall be a minimum of ¼-inch (6mm) high. Handwritten labels shall not be used for the final configuration.

- al **Telecommunications Patch Panel Labeling:** Patch panel labeling shall be IAW TIA/EIA 606. Each position shall be labeled with a unique designator corresponding to the outlet location. CAT6-compliant port for each outlet location shall be designated for data and shall be labeled "DATA." Fiber optic port labeling shall be IAW TIA/EIA 606. The left or top connection shall be labeled "A." The right or bottom connection shall be labeled "B." Color-coding IAW TIA/EIA-606-A may be added to the labeling.
- am **Distribution System Labeling:** The distribution system, as described in TIA/EIA-606-A for pathways, shall be labeled. In addition, all transitions and changes in distribution system size and type shall be labeled. Each cabinet or rack shall be labeled at the top with a unique designation.
- an **Grounding System:** The grounding system shall be labeled to include bus bars, bonding cables, and connections. Labels shall be provided at both ends of grounding conductor and at each connection point.
- ao **Fiber Termination Device:** Terminate the OSP FOCs on optical patch panels. Terminate the inside plant FO backbone cables on optical patch panels in the same or adjacent equipment racks. Connect patch cables between the patch panels to provide the desired connectivity. Stencil all patch panels with their panel number and the cable count.
- ap **Testing:** The designer shall specify that all telecommunications cable installed as part of a project be tested to the commercial standards for that cable system. Provide S-6 Telephone 858-577-6997 with an electronic (Excel) and hard (paper) copy of test results.
- aq **CAT6 Circuits:** All CAT6 circuits shall be tested using a test set that meets the accuracy requirements of the most recent revision of the ANSI/TIA/EIA-568 standards for cabling.
- ar **UTP Tests:** All metallic cable pairs shall be tested for proper identification (ID) and continuity. All opens, shorts, crosses, grounds, and reversals shall be corrected. Correct color-coding and termination of each pair shall be verified in the TR and at the outlet. Horizontal wiring shall be tested from, and including, the termination device in the TR to, and including, the modular jack in each room. Backbone wiring shall be tested end-to-end, including termination devices, from terminal block to terminal block, in the respective TRs. These tests shall be completed and all errors corrected before any other tests are begun.
- as **FOC:** All category FO circuits shall be tested using a test set that meets the accuracy requirements of the most recent revision of the ANSI/TIA/EIA-568 standards for cabling. Unless stated otherwise, tests shall be performed from both ends of each circuit. Connectors shall be visually inspected for scratches, pits, or chips and shall be re-terminated if any of these conditions exist.
- at **Fire Alarm System:** Fire alarm jacks will be punched down on RJ-31x jacks. Hardwiring of the fire alarm system into the telephone backbone is not authorized. **Test results along with rack elevation diagrams will be passed on to S-6 Telephone Office, 858-577-6997 prior to the Government acceptance. These results will be delivered in electronic format (CD with test results in Excel) and paper copy format (Test results in 1 inch binder).**
- au **Data Switch Patch Cables:** Provide all required, Blue seven foot CAT 6, for each TR.
- av **UPS Battery Systems:** Each TR will have two 2000 UPS battery systems connected to the building emergency power system.
- ax **TR Diagrammatic Layout:**



NOTES

1. GROUND BAR CONNECTED TO COPPER BUS BY #10 COPPER WIRE.
2. 2" 4" UNDERGROUND CONDUIT FROM MANHOLE TO ENTRANCE FACILITY.
3. TELEPHONE CABLE SPLICED ON TO TELEPHONE PROTECTOR.
4. FIBER OPTIC CABLE TERMINATED ON TO FIBER PATCH PANEL.
5. SPLICER ENCLOSURE CONTAINING SPLICER OF TELEPHONE CABLE ON TO TELEPHONE PROTECTOR TAIL.
6. TELEPHONE PROTECTOR.
7. 19" TYPE PUNCH-DOWN BLOCK FOR TELEPHONE PROTECTOR WIRING.
8. 19" TYPE PUNCH-DOWN BLOCK FOR INDIVIDUAL TELEPHONE OUTLETS.
9. 4'x8'x18" PLYWOOD BACKBOARD.
10. AC POWER OUTLET.
11. 19" WIDE X 24" HIGH STANDING RACK.
12. 1/2" THICK X 1" WIDE COPPER FREE BUS.
13. FIBER PATCH PANEL.
14. CAT 6 PATCH PANEL.
15. CAT 6 VOICE WIRING TO INDIVIDUAL OUTLET.
16. CAT 6 DATA WIRING TO INDIVIDUAL OUTLET.
17. 3/4" DIAMETER STEEL CONDUIT FOR CABLEING TO INDIVIDUAL OUTLET.
18. FOR DETAILED SPECIFICATIONS REFER TO "TELECOMMUNICATION REQUIREMENTS" SHEET.

2. Protected Distribution System (PDS).

This section defines the efforts required for the installation of a hardened carrier Protected Distribution System (PDS) to distribute classified National Security Information (NSI) between two or more controlled classified areas.

a. **References:** The PDS shall meet the criteria specified in the documents listed below:

- United States Navy/United States Marine Corps (USN/USMC) Information Assurance (IA) Publication Module 5239-22
- National Security Telecommunication and Information Security Systems Instruction (NSTISSI) No. 7003
- TIA/EIA Telecommunications Building Wiring Standards
- ANSI/TIA/EIA-569B, Commercial Building Standard for Telecommunications Cabling Standards

b. **PDS Conduit:** A Category II Hardened PDS carrier is afforded significant physical security protection and can be implemented by use of the following carriers:

- i. Electrical Metallic Tubing (EMT) – The carrier will be constructed of EMT, ferrous conduit of pipe, or rigid-sheet ducting, utilizing elbows, couplings, nipples, and connectors of the same materials. All connections should be permanently sealed completely around all surfaces (e.g., welding (continuous or tack), epoxy (continuous around joint), fusion, etc.).
- ii. Holocom Raceway (Secure Distribution System (SDS)) – The Holocom raceway/SDS utilizes a 2 inch x 2 inch 1008 MIN ANSI 16 gauge cold rolled steel (CRS) U-channel duct (raceway) for its hardened carrier, and a corresponding 16 gauge steel top-cap to cover the duct following network cable lay-in. There is an inline lock system that prevents the top-cap from being removed without tamper evidence.

c. **PDS Data Termination:** Copper Termination: Terminations will be performed using an 8-pin (RJ45 type) connector, rated for the category of the installed cable (CAT6). All terminations will be wired to the TIA/EIA

T568 B configuration.

- i. Secret Internet Protocol Router Network (SIPRNET) cabling will be red in color.
 - ii. The PDS secure distribution point (SDP) must originate in a room meeting the requirements of a secure storage area.
 - iii. All Restricted Access Areas (RAA) with SIPRNET data drops will meet the requirements of reference USN/USMC IA Pub 5239-22. RAAs will have PDS lock boxes.
 - iv. The SDP will have a secure wall mount enclosure (4U-Depth), to house SIPRNET Switch and Encryptor device.
 - v. Bottom of cabinet above finish floor (AFF) 4.0 foot.
 - vi. Requires standard duplex 120v at cabinet.
 - vii. Requires a (1) Unclassified Internet Protocol Router Network (NIPRNET) drop at the SIPRNET switch cabinet for the Encryptor connection.
- d. **PDS Epoxy:**
- i. Opaque epoxy will be used on the PDS connections. The brand will be either J-B Weld or Metal epoxy.
 - ii. All PDS connection joints, threads and fittings will be liberally epoxied
 - iii. All connections to PDS junction/pull boxes and lock boxes will be epoxied
- e. **Contractor Personnel:** The Contractor shall provide qualified personnel to perform duties during the PDS period of performance.
- f. **Contractor Duties / Deliverables:** The following deliverables will be provided in accordance with the references:
- i. Before installation, the contractor will provide the necessary information and, or documents to complete a PDS Design Approval Request (PDAR). In accordance with reference, USN/USMC IA Pub 5239-22, a PDAR will be submitted to Headquarters Marine Corps (HQMC) PDS certifiers. At a minimum, the following information will be provided:
 - A PDS diagram/drawing showing the planned path of the PDS conduit.
 - A list of materials identifying the type of PDS conduit to used.
 - A list of materials identifying the planned door locks to be installed within the PDS rooms.
 - ii. A final detailed PDS and cabling floor diagram/drawings, showing all conduit run pathways, junction box locations, outlet box locations, etc.
 - iii. The contractor will prepare “as-built” engineering drawings, both white paper and computer media.
 - iv. All fiber and copper cabling installed must be tested prior to government acceptance. The performance results of the cabling must meet or exceed industry standards and must be provided to the government.
- g. **Inspection and Acceptance:** The Government will inspect the Contractors performance as stated in this contract. All findings of incomplete or defective performance will be subject to correction at no additional cost or obligation to the Government. The Government or his /her authorized representative will perform inspection. In the event of non-compliance to the governing references, the Government will require re-performance of the nonconforming service at no additional cost or obligation to the Government.

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY

UFGS 28 31 00.00 10 - Analog/Addressable Interior Fire Alarm System

UFGS 28 31 02.00 20 - Fire Alarm Reporting Systems Digital Communicators

1. Addressable Fire Alarm Control Panel

- a. Provide an Addressable Fire Alarm Control Panel (FACP), unless otherwise directed by the Authority Having Jurisdiction (AHJ) – MCAS Miramar Fire Department. To be consistent with what is currently used aboard the installation, one of the following FACP's are approved for installation at MCAS Miramar:
 - i. Edwards EST Quickstart
 - ii. Notifier
 - iii. Siemens Fire Finder XLS, FS-250, or MXL
- b. At a minimum, provide the FACP with the following features:
 - i. The ability to store at least 400 events in the history log. These events must be stored in a non-volatile memory and remain in the memory until the memory is downloaded or cleared manually.
 - ii. Resetting the control panel must not clear the memory from being retrieved on the integral LCD display.
 - iii. An integral LCD 80 character (minimum) alphanumeric display.
 - iv. An RS 232-C port.
 - v. Provide all smoke detectors connected to the FACP with an adjustable alarm verification feature. Initially set the alarm verification 20 seconds.
- c. The Key to the FACP cabinet shall be either a CAT 60 or a T45 key.
- d. In new construction, FACP cabinets located in public spaces must be recessed and not be aesthetically obtrusive.
- e. The FACP must have the capability to silence fire alarm audible signals including waterflow signals.
- f. All Fire Alarm initiating devices shall be addressable, and each device shall be individually addressed.
- g. The Fire Reporting System aboard the installation is a Digital Alarm Communications (DAC). Provide either a FACP with an internal DAC Transmitter or an external BOSCH D7412G DAC Transmitter.
- h. The Digital Alarm Communication Receiver (DACR) is located at the Emergency Communications Center in building 7117. There are two (2) Radionics D6600 DAC Receivers installed in this location, a primary and a secondary.

- i. The DAC shall utilize a Point Contact ID format and shall be compatible with a BOSCH Conettix D6600 Communications Receiver/Gateway.
- j. The telephone jacks utilized for the DAC phone lines shall be RJ31X. NOTE: Dedicated telephone lines will not be utilized.
- k. The FACP shall be programmed with the primary and backup phone numbers. The DAC Receiver shall receive a distinct description for each type of initiating device.
- l. The DAC Transmitter shall be programmable to dial 4 separate phone numbers; the DAC Transmitter is required to report to 2-DAC Receivers located in building 7117.
- m. The primary and backup telephone numbers will be made available during the pre-final inspection to the MCAS Miramar Fire Department.
- n. Fire Alarm Installer shall contact MCAS Miramar Fire Department for additional requirements regarding the programming of the FACP, DAC Transmitter and Floor Plan.
- o. The Fire Alarm Installer shall submit the following Documentation:
 - i. A completed Fire Alarm System Record of Completion
 - ii. Point-to-Point Wiring Diagrams
 - iii. Individual Device Interconnection Drawings
 - iv. As-Built (Record) Drawings in format acceptable to the S-4 GIS/CAD Division
 - v. Owner's manual and installation instructions covering all system equipment
 - vi. Manufacturer's Proper Testing and Maintenance Requirements
 - vii. A record (CD) copy of the site-specific software, for software-based systems
- p. Provide rechargeable lead calcium or sealed lead acid type batteries to operate the fire alarm system under supervisory conditions for 60 hours and alarm conditions for an additional 15 minutes. Batteries will be permanently marked with the month and year they were installed.
- q. The Fire Alarm Installer will provide a graphic 8 ½ x 11 (protected in a frame) building floor plan, showing the locations of all manual pull stations, suppression system risers, smoke detectors, duct detectors and flame detectors, all labeled in RED. This graphic shall include the zones that correlate with the Zones on the FACP. This graphic will be located next to the FACP for use by Fire Department personnel.

2. **Mass Notification System (MNS).**

- a. If a Mass Notification System (MNS) is required the system shall be combined with the fire alarm.
- b.
 - i. LED text signs are not required as part of the MNS system

- ii. Provide clear strobes marked with the word “ALERT” for shared use by the building’s combination MNS/FA
- iii. Prerecorded MNS Messages shall be as follows:

3. Initiating Devices

- a. Provide a separate address for each flow switch.
- b. Provide addressable double action type manual pull stations with mechanical reset features. Break-glass-front stations are prohibited. If the manual alarm station requires a key for reset, it must be the same key as required for the FACP.
- c. Surface boxes, when provided for surface mounted manual pull stations, shall be the station manufacturer’s approved back box. Back box finish shall match station finish. Surface boxes shall have smooth side surfaces devoid of any knockouts. The surface boxes shall closely match the exterior contour of the manual pull stations.
- d. All duct detectors will report as a Supervisory Alarm.
 - i. Permanent placards shall be placed outside the first point of access, indicating that a detector is accessible from that point.
 - ii. All installed exterior duct/smoke detectors shall be weatherproof or within weatherproof enclosures.
- e. Provide remote test switches and remote light emitting diodes (LED’s) for each duct smoke detector.
- f. When under-floor smoke detectors are provided, provide graphic showing the location of the devices in the room. Locate a single graphic outside of the space the smoke detectors are in and adjacent to the FACP.

4. Wiring, Circuits and Conduit

- a. All terminations must be at a terminal strip.
- b. All devices must have screw terminals.
- c. Identify all conductors individually with permanent markings.
- d. Install all wiring in metallic conduit.
- e. All signaling line and initiating device circuits must be minimum 16 gauge wire.
- f. Paint all fire alarm junction boxes and covers red in unfinished areas (i.e. above ceilings, mechanical rooms, etc.). In finished areas, conduit and junction boxes can be painted to match the room finish, the inside cover of the junction box must be identified as “Fire Alarm” and the conduit must have painted red bands ¾-inch wide at 20 foot centers and at each side of a floor, wall or ceiling penetration.
- g. Provide type THW or XHHW for wiring in wet locations. Type THWN/THHN insulated wire is not acceptable for underground wiring of fire alarm circuits.

5. Exit Signs

- a. EXIT lights shall be UL listed LED.

6. Signage

- a. Provide signage for FACP and Risers located in rooms (i.e. “FACP Located Inside”/”Fire Sprinkler Riser Located Inside”)

7. Other Special Construction

- a. Fire Wall Identification: Identify all fire rated walls with signs stating the following: “Fire Wall Do Not Penetrate”, above drop ceilings at 10-foot intervals. For aesthetic reasons, this requirement does not apply to walls inside stairwells or public areas such as offices, lobbies, corridors, etc that do not have drop ceilings. In mechanical, electrical and other similar rooms, place signs at 8-feet above finished floor level. Space signs at a maximum of 10-foot intervals. In rooms with raised flooring, place signs on fire walls under the floor with spacing of signage reduced to 5 foot intervals. Apply signs using florescent red or orange paint over stencils. Letters must be a minimum of 4-inches in height. Do not use metal, plastic or paper decals.
- b. Fire Extinguishers:
- c.
 - i. Provide “Sentry Ansul” portable fire extinguishers in recessed or semi-recessed cabinets (if wall construction allows this type of mounting).
 - ii. Fire extinguishers shall be of the size and rating appropriate to the hazard.
 - iii. Mess halls and commercial cooking facilities shall be protected with Class “K” wet chemical type fire extinguishers.

DIVISION 31 - EARTHWORK

UFGS 31 23 00.00 20 - Excavation and Fill

1. Hard Material/”Caliche”.

- a. The following definitions are to be used:

Hard Material: Weathered rock, dense consolidated deposits or conglomerated materials and deposits which are not included in the definition of “rock” but which usually require the use of heavy excavation equipment, ripper teeth or jack hammers for removal. Hard Material is sometimes locally referred to as Caliche.

Rock: Solid homogeneous interlocking crystalline material which cannot be removed without systematic drilling and blasting, drilling and the use of expansion jacks or feather wedges, or the use of backhoe-mounted pneumatic hole punchers or rock breakers; also large boulders, buried masonry, or concrete other than pavement exceeding 0.375 cubic meters/13 cubic feet in volume. Removal of hard material will not be considered rock excavation because of intermittent drilling and blasting that is performed merely to increase production.

- b. The following bid statement will be used: All Bids are to be based on the following:
- 1) All excavations and trenching will encounter Hard Material. Excavation of Hard Material will not be cause for a changed field condition.
Blasting is not allowed.
Pipes or other artificial obstructions, except those indicated, will not be encountered.
It is the Contractor's responsibility to obtain suitable fill material.

2. Station Geographic Information System (GIS) coordination.

- a. Coordinate with the MCAS Miramar GIS Office as excavation and trenching proceed so Global Positioning System (GPS) data can be taking before backfill and/or follow-on construction cover new and existing encountered utilities, structures and/or foundations. MCAS Miramar GIS Office, Point Of Contact: Ms. Colleen Finch at (858) 577-1088, e- mail colleen.finch@usmc.mil.

3. Dig Permits - Underground Utility Mark-Out Procedures. Before using any non-human- powered mechanical implement to disturb the ground, do the following:

- a. At least 10 Working Days Prior:
 - i. Contact the MCAS Miramar Public Works Department Geographic Information Systems (GIS) Office for Telecommunications systems mark-out. The GIS office is located at 1st Floor, Building 6311, MCAS Miramar.
 - Fill out Part 1 of a MCAS MIRAMAR S-6 SUBSURFACE OPERATIONS PERMIT form.
 - Fax the permit and any attachments to (858) 577-6691.
 - Mark out the limits of the area you plan to disturb with white "mark-out" paint.
- b. At least 5 Working Days Prior:
 - i. Contact NAVFAC Southwest Utilities Mark-Out at (619) 556-7960.
 - Fill out Part 1 of a PWC San Diego "Subsurface Operations Permit".
 - Fax the permit and any attachments to (619) 556-9156/8892.
 - Mark out the limits of the area you plan to disturb with white "mark-out" paint.
 - ii. Visit the MCAS Miramar Public Works Department Geographic Information Systems (GIS) Office, 1st Floor, Building 6311, MCAS Miramar (POC: Colleen Finch, (858) 577-1088), to check on and get a print out of all

potential/known underground distribution systems in the area of planned excavations, trenching, pot holing, drilling, etc. Any drawings provided are for reference purposes only – the contractor remains responsible for following all mark-out and digging procedures.

- c. At least 2 Working Days Prior:
 - i. Call USA Dig Alert at (800) 277-2600 (<http://www.digalert.org/>)
 - ii. Call Time-Warner Cable at (619) 954-5081 (POC: Ron Turner)

- d. Before the Dig:
 - i. Ensure NAVFAC Dig Alert, Station GIS and USA Dig Alert has marked any known utilities at your site.

- e. During the Dig:
 - i. While you are working in the ground, your ROICC POC will write weekly interim performance evaluations, which will remain part of the contract file.
 - ii. If you hit a utility:
 - Immediately notify your ROICC office POC. If the ROICC POC is not available, contact PWC Trouble Desk immediately at (619) 556-7349.
 - Fill out a Utility Mishap Report within 30 minutes and provide it to your ROICC POC.
 - If you have hit a natural gas line, contact the Fire Department at (858) 577-4059
 - If you have hit a fuel line, contact the Fire Department at (858) 577-4059, and also contact the MCAS Fuel farm (858) 577-1397).
 - If you hit a utility that was marked, and the utility was where PWC marked it (within tolerance), you will be responsible for repair and other damages.
 - If you hit a utility and you are digging outside of the area you marked with white paint, you will be responsible for repair and other damages.
 - Other utility hits will be handled on a case-by-case basis between you and your ROICC POC.
 - Your ROICC POC may decide your dig is too risky and require all or part of the dig be done manually.
 - If you discover (but don't damage) a utility that was not marked, or was marked in the wrong place, inform PWC Utilities Mark-Out and the Public Works Department GIS Office. The GIS Office may survey the site with GPS to properly map the utilities.

DIVISION 32 - EXTERIOR IMPROVEMENTS

UFGS 32 84 24 - Irrigation Sprinkler Systems

1. **Central Irrigation Control System.** MCAS Miramar has a central irrigation control system. All new and retrofitted irrigation systems will be compatible.
2. **Title 22 Reclaimed Water.** All new irrigation lines will meet Title 22 compliance for recycled water to including "Purple" Pipe, valves and sprinkler heads. See Division 01, Section B, Sub-section.

APPENDIX A - ACRONYMS

A-

AICUZ - Air Installation Compatible Use Zone
AT/FP - Anti-Terrorism/Force Protection
AWSE - Airborne Weapons Support Equipment

B-

BEAP - Base Exterior Architectural Plan

C-

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

F-

FAA - Federal Aviation Administration

H-

HQMC-Headquarters Marine Corps

L-

LEED- Leadership in Energy and Environmental Design

M-

MAG-Marine Air Group
MALS-Marine Aviation Logistics Squadron
MAW-Marine Air Wing
MCAS-Marine Corps Air Station
MCB-Marine Corps Base
MCIWEST - Marine Corps Installations West
MCLB-Marine Corps
Logistics Base MWSG-
Marine Wing Support
Group MWSS- Marine
Wing Support Squadron

N-

NAVAIR-Naval Air Systems Command
NAVFAC - Naval Facilities Engineering Command
NAVFACSW - Naval Facilities Engineering Command Southwest
NEPA-National Environmental Protection Act

O-

O&M-Operations and Maintenance Manual

OMSI-Operations and Maintenance Support Information

R-

ROICC - Resident Officer In Charge of Construction

APPENDIX B - DEFINITIONS

G-Codes (similar to S-Codes) - Marine command department
designators: G - Commanding Officer is a General Officer

S - Commanding Officer is less than a General Officer

H&HS - Headquarters and Headquarter Squadron (Marine Air Units)

-3 - Operations

-4 - Installations & Logistics

-6 - Telecommunications

-7 - Environmental

SECTION J-3.2

MARINE CORPS RECRUIT DEPOT SAN DIEGO SPECIAL REQUIREMENTS

1. Contractor shall expect a high water table for any excavation activities and need to consider that in their proposals.
1. Equipment Preferences
 - a. Contractor shall include in their proposal, energy efficient systems (LED lighting, low-flow toilets, etc.) when the scope calls for the replacement of building materials.
 - b. Design consideration and equipment selections must be made that minimally impacts the base's ability to maintain the system.
2. Demolition
 - a. All utilities must be cut and capped near the main source.

--End--

SECTION J-4

**GENERAL REQUIREMENT FORMS FOR MARINE CORPS BASE CAMP
PENDLETON, NAVAL WEAPONS STATION SEAL BEACH FALLBROOK
DETACHMENT, MARINE CORPS AIR STATION MIRAMAR AND MARINE CORPS
RECRUIT DEPOT SAN DIEGO, CA**

ATTACHMENT J-4.1

SUBMITTAL TRANSMITTAL FORM

Provided as a separate attachment on the Federal Business Opportunities Website at
<http://www.fbo.gov>

ATTACHMENT J-4.2

SUBMITTAL REGISTER FORM

Provided as a separate attachment on the Federal Business Opportunities Website at
<http://www.fbo.gov>

ATTACHMENT J-4.3

RAPID GATE COMPANY ENROLLMENT FORM

Provided as a separate attachment on the Federal Business Opportunities Website at
<http://www.fbo.gov>