

DEPARTMENT OF HOMELAND SECURITY  
UNITED STATES COAST GUARD  
SHORE MAINTENANCE COMMAND

SPECIFICATIONS  
FOR  
DEMO OLD GROUP CAPE HATTERAS BUILDINGS AT  
U.S. COAST GUARD  
OLD GROUP CAPE HATTERAS  
BUXTON, NC

JULY 2011

COMMANDING OFFICER  
UNITED STATES COAST GUARD  
CIVIL ENGINEERING UNIT, RM 2179  
1240 EAST NINTH STREET  
CLEVELAND, OHIO 44199-2060

AUTHOR: AECOM North Carolina, Inc.

FINAL DESIGN DELIVERABLE

## TABLE OF CONTENTS

<u>Division</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1		<u>GENERAL REQUIREMENTS</u>	
	01010	Scope of Work	4
	01012	Work by Others	5
	01013	Project Phasing	5
	01015	Contractor Work Hours	5
	01028	Pre-bid Site Visits	6
	01030	Pre-Construction Site Conditions	6
	01040	Coordination	8
	01041	Field Adjustments	11
	01062	Utility Permits	12
	01063	Building Permits	12
	01067	Environmental Permits	12
	01200	Project Meetings	12
	01300	Submittals	13
	01310	Construction Schedule, Schedule of Values and Progress Schedule	14
	01370	Construction Daily Reports	15
	01510	Temporary Utilities	15
	01520	Protection from Weather and Construction Operations	16
	01540	Safety Program	16
	01541	Equipment/Utility Lockout and Tagout Requirements	18
	01542	Material Safety Data Sheets and Material Handling Procedures	18
	01543	Confined Entry	19
	01544	Temporary Fire Protection	19
	01550	Access Roads and Parking	20
	01566	General Cleanup and Site Restoration of Work Areas	20
	01567	Pollution Control	21
	01568	Erosion and Sediment Control	22
	01569	Hazardous Waste	24
	01579	Temporary Environmental Controls	25
	01620	Staging Areas and Access	46

TABLE OF CONTENTS (Cont.)

<u>Division</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1		<u>GENERAL REQUIREMENTS</u>	
	01650	Recovered Materials Notice	47
	01720	As Built Drawings	47
	01741	Construction and Demolition Waste Management	48
		List of Submittals	53
		Contract Item Acceptance Request	56
2		<u>EXISTING CONDITIONS</u>	
	02410	Demolition	57
	02741	Flexible Paving Repair	68
	02821	Engineering Control of Asbestos Containing Materials	73
	02831	Lead in Construction	92
31		<u>EARTHWORK</u>	
	31230	Excavation and Fill	98

DIVISION 1  
(January 2002 Version)

SECTION 01010  
SCOPE OF WORK

1. WORK INCLUDED: Major items of work shall include the following:
    - 1.1 Install appropriate site control and erosion and sedimentation control devices.
    - 1.2 Remove salvageable, recyclable and hazardous materials. Recycle, salvage and/or dispose of these items in accordance with all Federal, State and Local regulations.
    - 1.3 Demolish and/or dismantle existing structures in their entirety, including above-ground buildings, pool, subsurface utility vaults, 100-foot tower and other items. Dispose of debris at an off-site location in accordance with all Federal, State and Local regulations.
    - 1.4 Cut underground utilities five feet from building footprint.
    - 1.5 Coordinate disconnection and removal of transformers and other associated electrical transmission equipment adjacent to Building 018 with local electric utility.
    - 1.6 Replace existing wooden fence surrounding high frequency antenna with 6-foot high wooden, vertical pickets and a lockable, swing gate for access.
    - 1.7 Protect and maintain integrity of existing telephone communication line servicing high frequency antenna and hut, gazebo, National Oceanic and Atmospheric Administration hut and antennae.
    - 1.8 Provide earthwork as necessary to fill voids left by building demolition, vault removal, swimming pool removal, etc. to allow for future building/landscaping activities.
    - 1.9 Revegetate disturbed areas to match existing conditions.
    - 1.10 Work associated with these items is described in the following specification sections and/or are shown on the contract drawings. Incidental work items not listed above and necessary for completing the project shall be included.
  2. DRAWINGS: Drawings and the accompanying specifications are the property of the Government and comprise legal documentation that pertains exclusively to this project. Drawings can only be obtained electronically by downloading the files identified with this solicitation at <https://www.fbo.gov>. CEU Cleveland will not provide hard copies of drawings.
    - 2.1 Construction Drawings: 7887-D, Sheets 1 through 11 of 11
-

2.2 Reference Documents: Erosion and Sedimentation Control Plan/Permit  
Survey Base Map

---

SECTION 01012  
WORK BY OTHERS

1. WORK NOT INCLUDED IN THE CONTRACT: Non-contractor personnel will accomplish the following work items necessary for completion of the project. However, the Contractor must coordinate accomplishment of these work items with the appropriate parties noted below in accordance with Section 01040 COORDINATION.

1.1 Work by Coast Guard Personnel: Not applicable.

1.2 Work by Utility Companies: Utility company service crews will perform all electrical, water, natural gas, and/or sewer connections/disconnections to main service lines. The Contractor shall ensure that all equipment owned by the utility company (e.g., transformers, water/electric meters) are returned as necessary.

1.3 Work by other Contractors or Service Companies: Contractor personnel and equipment associated with another construction contract in progress may require access to the site during execution of this contract. The Contractor shall coordinate work and ensure that work operations do not interfere with the contract currently in progress. The Contractor shall allow service contract personnel access to the site for trash removal, snow removal, grounds maintenance or the performance of other related service contracts. The Coast Guard will advise the Contractor of the trash removal, grounds maintenance or other recurring maintenance schedules.

SECTION 01013  
PROJECT PHASING

1. To minimize interference with Coast Guard operations and maximize efficient execution, Contractor shall develop a Construction Schedule describing proposed project activities to accomplish contract work, as discussed in Section 01310 CONSTRUCTION SCHEDULE, SCHEDULE OF VALUES AND PROGRESS SCHEDULE.

2. The project demolition phase shall not be initiated until all asbestos containing materials have been abated.

3. Erosion control structures shall not be removed before permanent vegetation is established.

SECTION 01015  
CONTRACTOR WORK HOURS

1. WORK HOURS: Accomplish work during normal unit operational hours of 7:30 a.m. to 4:30

p.m., Monday through Friday unless otherwise approved by the Coast Guard. Note any departures from these work hours on the Daily Reports.

2. SATURDAY, SUNDAY AND HOLIDAYS: The Contractor shall provide the Contracting Officer's Technical Representative at least forty-eight hours advance notice prior to working on weekends or Federal holidays. The Government may reject any such request without impacting the completion time of the contract.

3. CONTRACT COMPLETION: The Contractor shall complete work within the time frame indicated upon issuance of the Notice to Proceed. Limitations imposed by these work hours will not entitle the Contractor additional time to complete the project. Refer to FAR Clause 52.211-10 "Commencement, Prosecution and Completion of Work".

#### SECTION 01028 PRE-BID SITE VISITS

1. GENERAL: Bidders are responsible for visiting the site to field verify existing conditions and determine actual dimensions and the nature of the work required. Failure to visit the site does not relinquish the bidder from determining the extent and scope of the work required and estimating the difficulty and cost to complete the project. Requests for equitable adjustments, in either time or money, arising from failing to field verify site conditions may be denied. Provisions regarding the site visit requirements are outlined in FAR Clause 52.236-3 "Site Investigation and Conditions Affecting the Work"

2. SITE VISIT: Arrange pre-bid site visits to verify existing conditions with Officer in Charge, U.S. Coast Guard Sector Field Office Cape Hatteras at 252-441-0300. The Officer in Charge may limit hours of access or levy certain restrictions regarding visits to the site.

#### SECTION 01030 PRE-CONSTRUCTION SITE CONDITIONS

1. SITE CONDITION VERIFICATION:

a. The Contractor shall verify the conditions of the existing site, equipment and facilities potentially affected by the work under this contract and photograph and/or videotape the conditions in order to document their preconstruction condition, as further described in Section 01579 TEMPORARY ENVIRONMENTAL CONTROLS. Copies of the photos and/or videos shall be submitted to the Contracting Officer prior to starting work.

b. Refer to Construction Drawings for project location and site plan.

c. Site Access: Access to the Site is via Old Lighthouse Road on the northern side of the work area. Old Lighthouse Road is paved with asphalt and gated at the entrance to the work area.

d. Site Status: The USCG discontinued operations at the Site in 2004 after Hurricane

Isabel. There are no daily USCG activities ongoing at the Site. Above-grade and underground utilities at the Site which were identified during the design are depicted on the Construction Drawings. Most utilities at the Site are no longer functional, with the following exceptions:

1. Overhead electric lines are active.
2. Several underground electric lines may be active.
3. One underground telephone line, which services the high frequency antenna and shed, is active.

e. Easements and Rights of Way: There are no known deeded easements or rights-of-way within the work area.

f. Other Site Activities:

1. The National Oceanic and Atmospheric Administration (NOAA) maintains remote-signal transmission and receiving equipment at the Southern end of the Site.
2. Residents of Buxton occasionally access the beach via an unpermitted pathway at the gated entrance along Old Lighthouse Road.

g. Utilities or Facilities:

1. The information and data shown or indicated on the Drawings with respect to existing utilities and facilities at or contiguous to the Project site are based on information and data furnished to the United States Coast Guard by the owners of such utilities or facilities or by Others. It also includes information obtained from subsurface utility engineering services performed during the design.
2. The United States Coast Guard will not be responsible for the accuracy or completeness of any such information or data relating to utilities or facilities. Contractor is required to locate all existing utilities prior to any subsurface Work.
3. The cost of all of the following will be included in the Contract Price and the Contractor shall have full responsibility for:
  - a. Reviewing and checking all information and data regarding existing conditions.
  - b. Locating all existing utilities and facilities including contacting the North Carolina One-Call Center (811) and performing a private utility locate within limits of disturbance and providing findings to the Contracting Officer prior to any land disturbance activities.
  - c. Coordination of the Work including temporary protection or relocation of interfering utilities with the owners of existing utilities and facilities prior to and/or during construction.
  - d. The safety and protection of all existing utilities and facilities designated to be protected on the Drawings or as directed by Contracting Officer and repairing any damage resulting from the Work.

2. UTILITIES: The Contractor shall use proactive measures such as digging, metering, testing, underground utility location devices, and utility company location services to locate all underground utilities identified in the area of work at no additional expense to the Government.

Additional cost of unplanned outages and repair of damaged utilities, including emergency repairs by others, not properly identified by the Contractor shall be the Contractor's responsibility.

## SECTION 01040 COORDINATION

1. INTERFERENCE WITH COAST GUARD OPERATIONS: Accomplish work in a manner that causes minimal impact on normal operations. The Contractor shall notify the Contracting Officer's Technical Representative at least five working days in advance of any planned outages of water, electrical, telephone, or sanitary facilities. Notify the Contracting Officer's Technical Representative at least one week prior to beginning construction.

### 2. MILITARY STATION REGULATIONS:

2.1 The Contractor, his employees, and subcontractors shall become familiar with and obey all station regulations. All personnel employed on the project shall keep within the limits of the work and avenues of ingress and egress, and shall not enter any other areas outside of the site of the work unless required to do so in the performance of their duties. The Contractor's equipment shall be conspicuously marked for identification.

2.2 There shall be NO SMOKING in any Coast Guard building or within the Work Area.

2.3 Storage Areas: The Contracting Officer's Technical Representative will determine exact location and boundaries of staging areas. Under no circumstances shall materials be stored in areas that will interfere with other station operations.

2.4 Storm Protection: If a gale force wind warning or higher is issued, take precautions to minimize any danger to persons and protect the work and nearby Government property. Precautions shall include, but not be limited to, closings, removing loose materials, tools and equipment, from exposed locations. Remove and secure scaffolding and temporary work. Close openings in the work area if storms of lesser intensity are imminent.

### 3. INTERFERENCE WITH AIRFIELD OPERATIONS:

Not applicable.

### 4. AIDS TO NAVIGATION EQUIPMENT

Not applicable.

### 5. CONTRACTOR'S PROJECT SUPERINTENDENT

5.1 The Contractor shall employ a qualified Project Superintendent for the duration of the Project. The Project Superintendent shall be experienced in surface and subsurface demolition, excavation, abandonment of utilities, coordinating transportation and restoration of surface and subsurface features and utilities. The Project Superintendent shall have a minimum of five years

of experience as a Project Superintendent on demolition projects of similar scope and comparable size as this Contract. The Contractor shall employ adequate project coordination staff to assist the Project Superintendent in the required control of sub-contractors, obtaining permits and approvals, development of progress schedules, and preparation of submittals.

5.2 The Contractor shall employ a qualified Project Manager for the duration of the Project. The Project Manager shall have a minimum five years of experience as a project manager on demolition projects of similar scope and comparable size as this Contract.

5.3 The Contractor shall not change the Project Superintendent without prior written approval from the Contracting Officer. The Contractor shall submit the resume of the superintendent, showing related experience and expertise, to the Contracting Officer.

5.4 The Contractor's Project Superintendent shall be on the Project site at all times during the work, including any work performed by sub-contractors. Should night shift work be scheduled, the Project Superintendent shall have the option of delegating responsibility to an acting night shift superintendent with prior written approval from the Contracting Officer.

5.5 The Project Superintendent shall be responsible for the completion of the work in accordance with the Construction Drawings and Specifications, as well as for the following specific duties:

5.5.1 Coordinate the work of Contractor's labor, equipment, and material as well as that of sub-contractors. The superintendent shall coordinate and interact effectively with Coast Guard, and others responsible for other aspects of the Project.

5.5.2 Coordinate the schedule such that the various tasks are completed within the specified construction milestones.

5.5.3 Participate in Project meetings with the Contracting Officer and others.

5.5.4 Schedule and conduct meetings with sub-contractors and other concerned parties as necessary to maintain the Project schedule, resolve issues in dispute, and efficiently coordinate use of utilities and other Project resources.

5.5.5 Ensure that quality control objectives are met and that quality control work is considered in the Project schedule so as to avoid delays in the Work.

5.5.6 Comply with Laws, Regulations, and Permit conditions.

## 6. COORDINATION – GENERAL

6.1 The Contractor shall coordinate scheduling, timely submittals, and the work of the various Sections of the Specifications, where feasible, to assure an efficient and orderly sequence of construction elements.

6.2 The Contractor shall direct communications regarding Project work to the Contracting Officer. The Contractor shall neither discuss Project work nor take direction from any other contractor, consultant, public official, the media, Town of Buxton staff, agency staff, or any other person without prior written approval by the Contracting Officer.

6.3 The Contractor's obligation to perform and complete the work depicted in these Drawings and Specifications in accordance with the Contract Documents shall be binding and in accordance with these Specifications. The following actions will not constitute acceptance of work that is not in accordance with the Drawings and Specifications nor will it constitute a release of Contractor's obligation to perform the work in accordance with these Contract Documents:

6.3.1 Observations by the Contracting Officer's Technical Representative and/or the Contracting Officer.

6.3.2 Recommendation of any progress payment or final payment.

6.3.3 Use or occupancy of the work or any part thereof.

6.3.4 Any acceptance by the Contracting Officer's Technical Representative, or failure to do so.

6.3.5 Any review and approval of a submittal.

6.3.6 Any inspection, test, or approval.

6.3.7 Any correction of non-conforming work performed.

6.4 Hazard Communication Program: The Contractor shall be responsible for coordinating any exchange of material safety data sheets (MSDS) or other hazard communication information required to be made available to or exchanged between or among employers at the site. The Contractor shall compile and properly file MSDS for all materials furnished by the Contractor or their sub-contractors and suppliers.

## 7. COORDINATION OF CONTRACTOR PROJECT WORK WITH OTHERS

7.1 The Contractor shall coordinate haul routes, any limitation on use of public streets, and obtain any needed permits or approvals for the use of public roads.

7.2 The Contractor shall coordinate Project work with various utility companies serving the Project site and shall secure any required permits and approvals, unless stated elsewhere in the Specifications. The Contractor shall be solely and fully responsible for notifying utility companies (via One Call), prior to commencing any work, and for response to any emergency that may arise on the Project during the course of the work. Utilities currently present at the site may be active or inactive. The Contractor shall verify their exact location and type and their status, without reliance on information provided by the Coast Guard. Several utilities may currently serve the Project site or adjacent properties including, but not limited to, the following:

7.2.1 Fiber optic cable

7.2.2 Electric

7.2.3 TV Cable

7.2.4 Water/Sewer

7.2.5 Storm sewer

7.2.6 Telephone or other communication

7.3 The Contractor shall verify that the Coast Guard has notified Dare County of the schedule and nature of demolition activities at least 30 days before implementation.

7.4 The Contractor shall verify that the Coast Guard has notified the United States Park Service and National Oceanic and Atmospheric Association at least 60 days before implementation.

7.5 The Contractor shall notify the Engineering Supervisor of the Sector Field Office Cape Hatteras and the Supervisor of the Electronic Support Detachment (ESD) Outer Banks at least 14 calendar days before implementation.

7.6 A Federal Consistency Certification Submission has been prepared for the North Carolina Division of Coastal Management. Contractor shall verify with the Contracting Officer that this certification has been approved prior to implementation.

7.7 An Asbestos Permit Application and Notification for Demolition/Renovation form (DHS 3768) has been prepared for the site. It will be the responsibility of the selected contractor to complete and submit Form DHS 3768 and to pay the applicable permit fees prior to initiation of asbestos removal activities. A copy of this form shall be provided to the Contracting Officer. Asbestos abatement procedures will be performed by a North Carolina accredited asbestos professional and will be in accordance with North Carolina statute 10A NCAC 41C.0600 and the National Emission Standards for Hazardous Air Pollutants relating to asbestos demolition and renovation found at 40 CFR Part 61, Subpart M - National Emission Standard for Asbestos (40 CFR 61-141-157).

7.8 A Lead-Based Paint Abatement Permit Application has been prepared for the site. It will be the responsibility of the selected contractor to complete and submit the Lead-Based Paint Abatement Permit Application and pay applicable permit fees prior to initiation of lead-based paint abatement activities. A copy of this form shall be provided to the Contracting Officer. Lead based paint abatement activities will be performed by a North Carolina accredited lead professional, and will be in accordance with North Carolina statute 10A NCAC 41C .0900 and 40 CFR Part 745, Subpart L Lead Based Paint Activities and 40 CFR Part 745, Subpart D – Identification of Dangerous Levels of Lead.

## SECTION 01041 FIELD ADJUSTMENTS

1. GENERAL: The Contracting Officer's Technical Representative may authorize field adjustments. Field adjustments are those alterations that do not affect time, price, or intent of the contract documents. All field adjustments shall be documented in the Daily Reports and on the As-Built Drawings.

SECTION 01062  
UTILITY PERMITS

1. GENERAL: The Contractor is responsible for obtaining all permits required for connection/disconnection to/from all public or private utility systems. This shall include all permit, inspection, administrative and accessory costs normally charged of customers by the utility.

1.1 All Tie-in and/or connection fees will be paid by the Contractor.

SECTION 01063  
BUILDING PERMITS

1. GENERAL: NO BUILDING PERMITS from state or local governments are required for work performed on federal property. Courtesy permits may be obtained at the Contractor's option. No payment will be made to the Contractor for any permit cost. Design changes to obtain courtesy permits, even at no cost, will not be allowed without written approval of the Contracting Officer.

SECTION 01067  
ENVIRONMENTAL PERMITS

1. GENERAL: The Coast Guard will be responsible for obtaining the Sediment and Erosion Control Permit and Federal Consistency Certification. Contractor shall be responsible for all other permits required to perform the Work. A list of all applicable permits shall be provided as part of the Environmental Management Plan, as described in Section 01579 TEMPORARY ENVIRONMENTAL CONTROLS.

SECTION 01200  
PROJECT MEETINGS

1. LOCATION: Project meetings will be conducted either on-site or with a conference call. The following meetings may be held:

1.1 Pre-Demolition Conference: After award of a contract, the Coast Guard will arrange a conference with the Contractor, and necessary Coast Guard personnel. The purpose of this conference is to orient the Contractor to Government procedures for wage rates, contractual and administrative matters, and to discuss specific issues regarding actual demolition.

1.2 Progress and Technical Review Meetings: These meetings generally take place at the project site. Either party may request a meeting to review the progress of the project and/or review or clarify the technical requirements of the specifications.

SECTION 01300  
SUBMITTALS

1. GENERAL: The Contractor shall submit to the Contracting Officer (4) copies of submittals required by this specification and/or itemized on the "**List of Submittals**" found at the end of this division.

2. REQUEST: A "**CONTRACT ITEM ACCEPTANCE REQUEST**" shall accompany all submittals. All items shall be individually listed and clearly identified, referencing the applicable Section and Paragraph. A copy of this form is located at the end of this division and may be reproduced as needed.

2.1 Up to eight (8) items may be listed on an individual acceptance request. Number each Contract Item Acceptance Request consecutively (*Submittals # 1, 2, etc.*) and re-submittals with letters (*Submittal #1A is the first re-submittal of Submittal #1*).

2.2 Submittals shall be forwarded to the Contracting Officer. The Contractor **shall allow 14 calendar days**, excluding mailing time, for the review process in the Construction Schedule and all project planning. In instances where submittal review must be expedited, the Contractor may annotate the Contract Item Acceptance Request as "Urgent" and provide a FAX number for prompt return. The Coast Guard will make every effort to accelerate the review of each urgent submittal; however, the Contractor should not anticipate a reduced time schedule and shall plan project progress accordingly.

3. ACCEPTANCE: Submittals will be stamped "Accepted," "Accepted with Comments," or "Resubmit". Acceptance, Acceptance with comments or Resubmit for each item will be indicated on the Contract Item Acceptance Request form and one copy returned to the Contractor.

3.1 **Prompt re-submittal of items is required.** The Contractor shall furnish a new Contract Item Acceptance Request numbered in accordance with the requirements of paragraph 2.1.

4. DEFECTIVE WORK: Acceptance of Submittals **does not** restrict the Government's right to reject departures from contract requirements, use of damaged or improperly installed items/materials, or latent defects, nor does it prejudice the Government's rights of rejecting any work found defective at Final Inspection and Acceptance.

4.1 Work started or completed prior to submittal acceptance is **solely** at Contractor's risk and may jeopardize contract performance.

SECTION 01310  
CONSTRUCTION SCHEDULE, SCHEDULE OF VALUES,  
AND PROGRESS SCHEDULE

1. **GENERAL:** In accordance with the Notice to Proceed letter, the Contractor shall submit the following:

a. Construction Schedule-This schedule shall be prepared using a horizontal bar graph with time scale. It shall be in an industry accepted Project Management format and shall accurately display:

1. All major categories of work to be performed within the required contract completion date broken out in sufficient detail to track progress throughout the life of the contract. In addition to construction activities, procurement times for critical items, submittal turnaround time, mobilization, final inspection, punchlist work, and demobilization shall be shown on the schedule.
2. The duration of each work category.
3. Any concurrent work categories.

b. Schedule of Values-This schedule shall be prepared as a **detailed** cost breakdown of the contract price and be submitted with the Construction Schedule. This schedule shall include but not be limited to costs of materials, equipment, and labor for all major work categories shown on the Construction Schedule. The Contractor shall adhere to the following guidelines when developing the Schedule of Values.

1. Format - The line items in the Schedule of Values **shall** be the same as that of the Construction Schedule.
2. Bonds - Bonding costs will only be paid in a lump sum if they are broken out separately and included with the schedule of values. The Contractor shall provide evidence that he has furnished full payment to the surety.
3. Materials - To request progress payments for materials delivered to the construction or fabrication site, the particular category of work associated with the materials must be broken down into separate material and labor costs.

2. **UPDATES:** Each month and /or with each progress payment request, the Contractor shall submit the following:

a. **Progress Schedule**-This schedule shall be an update of the Construction Schedule. It shall show the current schedule of all work.

1. Modifications - If modifications are made to the contract, the work added shall be tracked separately from the original Construction Schedule and shall maintain its individuality on the Progress Schedule throughout the life of the contract. Progress Payment requests shall not lump modification costs into the original contract price.

SECTION 01370  
CONSTRUCTION DAILY REPORTS

1. **GENERAL:** **The Contractor shall complete a Daily Report for each and every day after mobilization.** The importance of an accurate, fully detailed Daily Report, promptly delivered to the designated On-Site Representative cannot be overemphasized. The report shall provide an accurate cumulative summary of the history and performance of the work. The Daily Report shall document weather; work hours; work in-place; inspections and tests conducted, and their results; dimensional checks; equipment and material checks; data on workers by classification; the mobilization and demobilization of construction equipment; materials delivered to the site; and any other pertinent noteworthy event; e.g., personnel injury, site visit by Coast Guard personnel, etc.
2. **RESPONSIBILITY:** The Daily Reports play an important role in settling disputes and claims for both parties. For this reason the On-Site Representative and the Contractor's Superintendent, together, should review the report to ensure its completeness and accuracy. Each day's report shall be submitted to the On-Site Representative no later than 10:00 a.m. the following morning. The maximum allowable retainage will be enforced for late, sporadic or non-submission of Daily Reports. In the absence of an On-Site Representative the Contractor shall mail the Daily Reports directly to the Contracting Officer every Friday. Should the Daily Report indicate an accident, environmental issue, OSHA violation or any crisis the On-Site Representative deems important, the Report should be faxed to the Contracting Officer at (216) 902-6278 immediately.
3. **DESIGNATED ON-SITE REPRESENTATIVE RESPONSIBILITY:** After a Notice to Proceed for site work has been issued the On-Site Representative shall complete a Daily Report for each day until the Contractor mobilizes. After the Contractor is at the site, the On-Site Representative shall ensure that the Contractor completes the Daily Report in accordance with Paragraphs 1 and 2 above. Any items of dispute or other notes the On-Site Representative feels appropriate shall be added to the Daily Report. The On-Site Representative is also responsible for informing the Contracting Officer's Technical Representative when the Contractor fails to submit daily reports.

SECTION 01510  
TEMPORARY UTILITIES

1. **GENERAL:** All temporary utility connections shall be compatible with existing materials and equipment to provide safe and efficient installation, operation and removal. There are no utilities available on site. The Contractor shall provide portable generation, water, portable toilets and other services necessary to complete the project.
2. **ELECTRICITY AND WATER:** Electrical power and water are not currently available on the site. There are active overhead electric lines along Old Lighthouse Road; the Contractor may coordinate with the local electric utility to provide a temporary power drop. The use of the electricity shall be limited to tools that can be operated on 60 Hertz, single phase, 20 ampere, 120 volt circuits. The old water meter connection for the site is located north of the access gate as

shown on the Drawings. The Contractor may coordinate with the local water utility to provide a temporary connection. The Contractor is responsible for installing and removing all connections to existing systems and shall ensure work and materials are in accordance with local codes. All costs associated with temporary utility connections shall be borne by the Contractor.

3. TELEPHONE: Telephone services will not be available for use by the Contractor.
4. SANITARY FACILITIES: It shall be the Contractor's responsibility to furnish and maintain approved portable toilet facilities for all Contractor personnel. The On-Site Representative will designate the physical location for the facility and the Contractor shall maintain the toilet facility to the satisfaction of the Government. Contractor personnel are forbidden to use toilet facilities within existing buildings.

#### SECTION 01520 PROTECTION FROM WEATHER AND CONSTRUCTION OPERATIONS

1. TEMPORARY ENCLOSURES: Protect existing facilities/equipment and new construction, whether in progress or newly completed, from the adverse effects of the weather and construction operations. Provide temporary enclosures, coverings and barriers as required to afford protection against exposure, weather and wind damage and from construction operations which could degrade, stain, age, or reduce the finished quality of new work or damage existing facilities and equipment.
2. REAPPLICATION: All temporary closures or enclosures shall be made ready for immediate re-application in the event of sudden storms or man-made conditions requiring protection of existing facilities or completed construction.
3. CLIMATE CONTROL: Where temporary heat is required during construction to protect work completed or to heat facilities in operation by the Coast Guard, all openings shall be made weather tight to allow the maintenance of 68 degrees F heat minimum with the existing or temporary heating equipment or 78 degrees F. maximum with existing or temporary cooling.  
NOTE TO OFFEROR: CLIMATE CONTROL SPECIFICALLY REQUIRED BY THIS CONTRACT WILL BE SPECIFIED IN THE STATEMENT OF WORK AND/OR ASSOCIATED DRAWINGS.
4. PIPING: Prevent water-filled pipes or tanks from freezing for both interior and exterior systems installed or in storage.

#### SECTION 01540 SAFETY PROGRAM

1. GENERAL: The Contractor is wholly responsible for work site safety. The Contractor shall implement a safety program that protects the lives and health of personnel in the construction area, prevents damage to property, and avoids work interruptions. The Contractor shall provide

appropriate safety barricades, signs, signal lights, etc. as well as complying with the requirements of all applicable Federal, State and Local safety laws, rules and regulations. On-site burning or blasting activities shall not be permitted during demolition activities. Use of a wrecking ball is also prohibited.

2. **COMPLIANCE:** The Contractor is specifically required to comply with the requirements of the U. S. Army Corps of Engineers "Safety and Health Requirements Manual" (EM 385-1-1, *latest version available*) and the "Accident Prevention" clause (FAR 52.236-13).

3. **SAFETY PLAN:** The Contractor **shall submit a written safety plan.** At a minimum, this plan shall describe the Contractor's general safety program and identify specific safety provisions for hazards incidental to the contract work; e.g., elevated working surfaces, working over water, working from floating work platforms, overhead crane operations, etc. Once accepted, this safety plan shall become part of the contract requirements. ***Note: This review/acceptance does not in any way relinquish the Contractor from responsibility for work site safety nor the obligation to comply with the OSHA regulations found in 29 CFR 1910 & 1926 or any other State or Local safety law, rule or regulation applicable to the contract work. The Coast Guard will cooperate fully with the Department of Labor (Occupational Safety and Health Administration) in their enforcement of OSHA regulations.***

Demolition activities will be in accordance with both the General Industry (29 Code of Federal Regulations [CFR] 1910) and Construction Industry (29 CFR 1926) standards promulgated by the Occupational Safety and Health Administration. Subparts specific to demolition operations are listed in below. In addition, demolition activities will abide by *Safety Requirements for Demolition Operations* (American Society of Safety Engineers A10.6).

Standard	Description
29 CFR 1910	General Industry
29 CFR 1926	Construction Industry
Subpart D	Occupational health and environmental controls
1926.62	Lead
Subpart E	Personal protective and life saving equipment
1926.100	Head protection
1926.103	Respiratory protection
Subpart J	Welding and cutting
1926.350	Gas welding and cutting
Subpart L	Scaffolds
1926.451	General requirements
Subpart M	Fall protection
1926.501	Duty to have fall protection
1926.502	Fall protection systems criteria and practices
1926.503	Training requirements
Subpart T	Demolition
1926.850	Preparatory operations
1926.851	Stairs, passageways, and ladders

1926.852	Chutes
1926.853	Removal of materials through floor openings
1926.854	Removal of walls, masonry sections, and chimneys
1926.855	Manual removal of floors
1926.856	Removal of walls, floors and material with equipment
1926.857	Storage
1926.858	Removal of steel construction
1926.859	Mechanical demolition
Subpart Z	Toxic and hazardous substances
1926.1101	Asbestos

**SECTION 01541  
EQUIPMENT/UTILITY LOCKOUT AND TAGOUT REQUIREMENTS**

1. **GENERAL:** The Contractor shall comply with OSHA 29 CFR 1910.147, “The Control of Hazardous Energy (Lockout/Tagout). The Contractor shall provide a Lockout/Tagout Plan to the Contracting Officer prior to starting any work affected by the energy in the equipment/utility system.
2. **APPLICATION:** The Contractor shall be responsible for locking out and tagging out of service, all equipment/utility systems involved in the work under this contract. After the Contracting Officer’s Technical Representative has approved an outage, Government personnel and the Contractor shall independently secure the equipment/utility system and tag the respective system out of service. The Contractor shall provide their own locks and chains that are required to secure the equipment/utility systems; e.g., steam, water, air, and/or electricity.

**SECTION 01542  
MATERIAL SAFETY DATA SHEETS AND MATERIAL HANDLING PROCEDURES**

1. **DATA SHEETS:** Submit a Material Safety Data Sheet (MSDS) for all materials containing hazardous substances required for contract execution. Information provided in MSDS’s shall meet the requirements of 29 CFR 1910.1200. MSDS’s require Contracting Officer review and acceptance prior to bringing these materials on site.
2. **MATERIAL STORAGE:** Limit the quantity of these materials stored on site to the amount needed for execution of work. Storage of excess materials will not be permitted. Assure that the storage of these materials comply with all applicable federal, state, and local laws and regulations and provide additional storage facilities (paint lockers, etc.) as required for the storage of such materials. Coordinate the physical location of storage areas with the On-site Representative prior to bringing these materials on site.
3. **PROTECTIVE MEASURES:** The contractor shall take all protective measures outlined on

the MSDS's and as required by federal, state and local regulations to protect all personnel in the vicinity of the work area from exposure to these materials. The Contractor shall include any required protective measures in the Safety Plan (See SECTION 01540). The Contracting Officer's Technical Representative shall review protective measures prior to allowing use of these materials.

4. DISPOSAL OF EXCESS MATERIAL: The Contractor shall dispose of all excess hazardous materials as required by the MSDS and all applicable federal, state, and local laws and regulations.

#### SECTION 01543 CONFINED ENTRY

1. COMPLIANCE: The Contractor shall comply with OSHA 29 CFR 1910.146, Permit-Required Confined Space. The Contractor shall provide a Confined Space Entry Plan to the Contracting Officer prior to entering, or starting any work, in a confined space. The Contractor shall provide all equipment and materials as required to comply with OSHA and complete the work under this contract.

#### SECTION 01544 TEMPORARY FIRE PROTECTION

1. TEMPORARY FIRE PROTECTION: Install and maintain temporary fire-protection facilities to protect against predictable and controllable fire loss. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations".

1.1 Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher at each floor stairwell and one at each building construction opening for personnel egress.

1.2 Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways and other access routes for fighting fires.

1.3 Provide independent supervision of welding, flame cutting and other open flame work. Provide each fire supervisor with an appropriate fire extinguisher.

1.4 Provide training for all personnel on-site in the proper operation of each type of fire extinguisher provided. Provide all personnel with the proper notification procedure to summon the local fire department or emergency medical service.

1.5 There shall be NO SMOKING or unsupervised open flame permitted within the entire work area.

SECTION 01550  
ACCESS ROADS AND PARKING

1. ACCESS: Access to the site is available from public roads. Any damage to these roads by the Contractor's vehicles shall be repaired without cost to the Government.
2. PARKING: Vehicular operations and parking shall comply with all applicable government orders and regulations. All driveways and entrances serving the Government shall be kept clear and available to emergency vehicles at all times.
3. VEHICLE AND VEHICLE OPERATION: All vehicles, owned by the Contractor or employees of the Contractor, and operators of these vehicles, shall meet all state regulations for safety, noise, loading and minimum liability insurance. All vehicle operators demonstrating reckless or careless operation in the opinion of the Government shall not be allowed to operate vehicles on government property for the duration of the contract.
4. VISITORS: No visiting vehicles will be permitted on government property unless the operator is employed by a subcontractor or supplier.

SECTION 01566  
GENERAL CLEANUP & SITE RESTORATION OF WORK AREAS

1. GENERAL: The Contractor shall remove and properly dispose of all trash and debris incidental to the contract work from the limits of government property, as well as all adjacent affected areas. The Contracting Officer shall determine the extent and interval of these cleanups.
2. WORK AREA CLEANUP: At the end of each day the entire work area and all adjacent affected areas shall be thoroughly cleaned by removing all trash, debris, dust, etc. caused by the contract work. Any floor, wall or ceiling surfaces that may have been stained or soiled by the contract work shall be restored to pre-construction condition.
3. SITE RESTORATION: If at any time while performing the contract the Contractor causes damage or destruction to any portion of any Government facility or grounds; e.g., bulkheads, pavement, lawns, shrubbery, etc., it shall be the Contractor's responsibility to replace and/or restore the damage as approved by the Contracting Officer's Technical Representative at no additional cost to the Government.
4. POST CONSTRUCTION CLEANUP: Upon completion of the job, the Contractor shall clean up the job site, returning it to a state of cleanliness equal to or exceeding that in which it was found. The Contractor shall properly dispose of any trash, extra materials, dirt, debris, or other litter that remains. If the job site appearance is not to the satisfaction of the Contracting Officer's Technical Representative, final acceptance will not be approved.

SECTION 01567  
POLLUTION CONTROL

1. VOLATILE ORGANIC COMPOUND (VOC) REGULATIONS: Contractors are required to comply with local, state and federal VOC compliance laws and regulations in the foregoing order of precedence. In order to comply with the provisions of the Clean Air Act, each state must have a State Implementation Plan. Some contractors may be required to abide by the provisions of a Title V Permit. Some contractors may be required by state or local law to operate under the terms of a Compliance Plan to reduce VOC Emissions.

1.1 In accordance with the Notice to Proceed Letter, the contractor will submit copies of any local, state or federal implementation plans, permits or compliance plans required/applicable to the use/application of VOCs at contractor's facility or offsite work places.

1.2 If no local, state or federal implementation plans, permits or compliance plans are required/applicable to the use/application of VOCs, then the contractor shall submit to the designated Contracting Officer a letter, notarized under oath, that such documents are not required.

1.3 If the use of paint is required the Contractor shall submit to the Contracting Officer and in accordance with the Notice to Proceed Letter, certificates, specifications or manufacturing data verifying the VOC rating.

2. SPILL RESPONSE PLAN: The Contractor shall submit a Spill Response Plan covering all regulated materials brought to the site for execution of work and all wastes generated as a result of the work to the Contracting Officer. The plan shall include, at a minimum, the following: types and quantity of all substances covered under this plan; the reportable quantity (RQ) for each substance; the onsite storage location of each substance; the Contractor's spill response equipment, if applicable; procedures to be followed for responding to a spill, including initial responses to be taken; procedures to be followed in reporting a spill, including the names and telephone numbers for all federal, state, and local agencies/authorities to be notified; and the name, address, and telephone number (work, home, cell and pager) of all Contractor response and media relations personnel.

2.1 The Spill Response Plan shall abide, at a minimum, to the following:

- a. All pollutants that occur on the Project site during construction shall be handled and disposed of in a manner that does not impact storm water runoff.
- b. Fueling Contractor equipment shall be performed at least 50 feet from storm drain inlets and catch basins.
- c. Extreme care shall be taken to prevent fuel spills. Spill prevention and clean-up procedures shall be followed during the fueling operation. The Contractor shall notify the Contracting Officer, the Contracting Officer's Technical Representative, the local Fire Department, and other authorities in the event of a spill. The Contractor shall be solely responsible for responding to fuel spills, including all costs of removing, decontaminating, and disposing materials impacted by spills.
- d. The Contractor shall provide and maintain absorbent materials, shovels, and containers

for proper spill response and clean-up. Clean-up materials and methods shall be consistent with standard, approved methods for the type of fuels, oils, and other materials used.

2.2 In the event of a spill or release, the Contractor shall be responsible for immediate implementation of the spill response plan and restoration of the site to pre-spill condition at no cost to the Government. The Contractor shall also immediately notify the Contracting Officer to coordinate further notifications.

## SECTION 01568 EROSION AND SEDIMENT CONTROL

1. GENERAL: The Contractor shall implement erosion and sediment control measures as indicated on the Construction Drawings and in the Erosion and Sedimentation Control Plan. The Contractor shall plan and execute all earthwork to minimize the duration of exposure of unprotected soils. Temporary protection shall be provided on side and back slopes as soon as rough grading is completed or when sufficient soil is exposed to require protection to prevent erosion. All earthwork brought to final grade shall be finished immediately.
2. METHODS: The Contractor shall prevent erosion, control sedimentation, and prevent waterborne soil from entering surface waters, ditches, and storm drain inlets by use of any or all of the following methods.
  - 2.1 Mechanical Control: Divert runoff by constructing ditches or berms. Filter runoff using straw bale dikes, filter fabric dams or other methods.
  - 2.2 Vegetation and Mulch: Protect slopes by accelerated growth of vegetation, mulching, or netting. Stabilize slopes by hydroseeding, sodding, anchoring mulch or netting in place.
  - 2.3 Geotextiles: Protect and stabilize slopes by anchoring geotextile fabric or matting. The Contractor shall use a geotextile designed and sized for the particular application.
3. OTHER METHODS: Other erosion and sediment control methods may be used, as authorized by the Contracting Officer.
4. PERFORMANCE REQUIREMENTS:
  - a. Permits and Approvals: The Coast Guard has submitted a Soil Erosion and Sedimentation Control Plan, which is included with the solicitation. The Contractor shall comply with all the conditions of all Permits and approvals.
  - b. Compliance: The Contractor shall be responsible for compliance with Permit conditions including best management practices as outlined in the Soil Erosion and Sedimentation Control Plan for the site.

- c. Practices: The Contractor shall employ the following general procedures, or other procedures as required by the approved Soil Erosion and Sedimentation Control Plan:
  - 1. Sand Controls: Contractor shall take necessary precautions and implement best management practices to prevent sediment/sand from entering roadways.
- d. Street Cleanliness: Where construction and excavation vehicle access routes intersect public roads, the Contractor shall take action to prevent the transport of sediment (mud, sand, or dust) onto public streets. The Contractor shall construct haul roads, with necessary controls to prevent sediment transport to public streets. Contractor shall clean the road thoroughly at the time that sediment impacts the roadway. The Contractor shall remove sediment from the roads by vacuum sweeping. Such sweepings shall be transported to the on-site stockpile area. Street washing shall be allowed only after sediment removal and in conjunction with the use of vacuum sweepers. The Contractor shall maintain a fully-operable vacuum street sweeper on the site at all times during the time that transport of sediment occurs. The vacuum street sweeper shall be sized to quickly and efficiently sweep the public streets in the town.
- e. Surface Restoration: The Contractor shall establish healthy permanent vegetation everywhere soils are disturbed as described in the approved Soil Erosion and Sedimentation Control Plan. Outside of the growing season, the Contractor shall establish healthy temporary vegetation prior to overseeding or overplanting a permanent species as described in the approved Soil Erosion and Sedimentation Control Plan.

#### 4.1 Surface Water Runon/Runoff Control

- a. The Contractor shall not intercept stormwater and divert it away from excavations. Contractor shall not divert stormwater runon entering the excavation/demolition areas.
- b. The Contractor shall protect stormwater runoff from the construction area using the BMPs as indicated on the Soil Erosion and Sedimentation Control Plan.
- c. The Contractor shall prevent surface water run-off from transporting sediment or other contaminants off-site. Any stormwater coming in direct contact with source material or other contaminants shall not be allowed to leave the site. The Contractor shall be responsible for management of site stormwater.
- d. The geotextile fabric silt fence shall conform to the Soil Erosion and Sedimentation Control Plan specifications.
  - 1. Filter fabric fences shall be removed when they have served their useful purpose, but not before the upslope area has been permanently stabilized. Retained sediment must be properly removed. Slopes shall be mulched and seeded.

#### 4.2 Wind Fence Screen

- a. Wind fence screen materials and supports shall be heavy-duty and pre-assembled, conforming to the requirements of the Construction Drawings, Specifications, and Soil Erosion and Sedimentation Control Plan for the site

#### 4.3 Tree Protection

- a. Tree protection measures are not necessary. Trees which interfere with demolition activities can be removed. Trees which do not interfere with demolition activities may remain.

#### 4.4 Inspection And Maintenance

- a. Contractor Inspections must be completed by a certified erosion and sediment control lead (CESCL). The CESCL must be certified through an approved erosion and sediment control training program that meets the minimum training standards established by North Carolina Department of Environment and Natural Resources (NCDENR).
- b. The Contractor shall inspect and repair or replace damaged components of temporary erosion and sediment controls daily or more frequently as directed by the Contracting Officer's Technical Representative. Inspect immediately after rain or flooding events, and inspect daily during prolonged rain events. Written records shall be kept of weekly reviews of the ESC facilities.
- c. The Contractor shall remove sediment deposits and place them in designated stockpile areas. Sediments shall not be allowed to migrate off site. Any sediment that has been in contact with contaminated material shall be incorporated into material to be transported for treatment or disposal.
- d. Contractor equipment and vehicles are prohibited from operating outside the right-of-way and easement for construction and shall operate only on USCG-owned property.
- e. Damage to erosion and sediment control systems caused by construction operations, weather, or negligence shall be repaired immediately at no additional cost to the Coast Guard.
- f. The Contractor shall not remove BMPs without approval from the CESCL, even after the completion of demolition activities.

### SECTION 01569 HAZARDOUS WASTE

1. **GENERAL:** The Contractor shall comply with all federal, state, and local environmental regulations dealing with the generation, management, storage, and disposal of solid, toxic, and hazardous wastes. The Contractor shall ensure that all wastes are properly

containerized, labeled and placarded, managed, tested, stored, transported and disposed of in accordance with all applicable regulations.

2. USED ELECTRIC LAMPS: The Universal Waste Regulation (40 CFR Part 273) provides alternative guidelines for managing electric lamps, including incandescent, fluorescent, neon and high intensity discharge (mercury vapor, high/low pressure sodium, metal halide) lamps that are no longer of use. The Contractor shall not dispose of any used electric lamps as solid waste. The Contractor shall collect, handle, store, package, and transport all in-tact and broken universal waste lamps in accordance with 40 CFR Part 273. The Contractor is not permitted to consolidate universal waste lamps on Site using a drum-top crusher or other destructive method. The Contractor shall transport all universal waste lamps generated as a result of this work to a licensed universal waste destination facility or transfer facility. The Contractor shall provide documentation on the quantity of universal waste handled to the U.S.C.G.
3. ASBESTOS: Asbestos containing materials will be managed as specified in Section 02821 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS.
4. LEAD: Lead containing materials will be managed as specified in Section 02831 LEAD IN CONSTRUCTION.
5. OZONE DEPLETING SUBSTANCES: Ozone depleting substances will be managed as specified in Sections 01579 TEMPORARY ENVIRONMENTAL CONTROLS and Section 01741 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT.
6. METALS: Unless noted otherwise, scrap metal shall not be landfilled or treated as hazardous waste. Recycle all scrap metal by smelting or any other acceptable recycling process. Scrap metal includes ductwork, light fixture housings, pipe, mechanical and electrical equipment, doors and frames, etc.
7. SUBMITTALS: The Contractor shall provide the Contracting Officer with signed and fully executed originals of all hazardous waste profiles, test results, hazardous waste manifests and/or other shipping papers, electric lamp disposal documents and all other required documentation. Maximum payment retention shall be withheld until this documentation is received.

SECTION 01579  
TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 - GENERAL

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

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 State 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 of 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 Packaging
49 CFR 178	Specifications for Packaging

## 1.2 Definitions

- 1.2.1 Sediment: Soil and other debris that have eroded and have 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:
- Green waste: The vegetative matter from landscaping, land clearing and grubbing, including, but not limited to, grass, bushes, scrubs, small trees and saplings, tree stumps and plant roots. Marketable trees, grasses and plants that are indicated to remain, be re-located, or be re-used are not included.
  - 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.
  - Debris: Non-hazardous solid material generated during the construction, demolition, or renovation of a structure which exceeds 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 not be included as recyclable if sold to a scrap metal company.
- h. Hazardous Waste: By definition, to be a hazardous waste a material must 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 must be handled separately. They are thus defined separately in this document.

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.

- 1.2.3 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.
- 1.2.4 Chemical Wastes: This includes salts, acids, alkalizes, herbicides, pesticides, and organic chemicals.
- 1.2.5 Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

- 1.2.6 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 State 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.
- 1.2.7 Hazardous Materials: Hazardous materials as defined in 49 CFR 171 and listed in 49 CFR 172. 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.

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 materials 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).

- 1.2.8 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.
- 1.2.9 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 other State and local requirements.

This definition includes materials such as oily rags, "kitty litter" sorbent clay and organic sorbent material. These materials may be land filled provided that:

- a. It is not prohibited in other State regulations or local ordinances
- b. The amount generated is "de minimis" (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

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 must 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.

1.2.10 Regulated Waste: Those solid waste that have specific additional Federal, state, or local controls for handling, storage, or disposal.

1.2.11 Class I Ozone Depleting Substance (ODS): 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

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)  
hydrochlorofluorocarbon-233 (HCFC-233)  
hydrochlorofluorocarbon-234 (HCFC-234)  
hydrochlorofluorocarbon-235 (HCFC-235)  
hydrochlorofluorocarbon-241 (HCFC-241)  
hydrochlorofluorocarbon-242 (HCFC-242)  
hydrochlorofluorocarbon-243 (HCFC-243)  
hydrochlorofluorocarbon-244 (HCFC-244)  
hydrochlorofluorocarbon-251 (HCFC-251)  
hydrochlorofluorocarbon-252 (HCFC-252)  
hydrochlorofluorocarbon-253 (HCFC-253)  
hydrochlorofluorocarbon-261 (HCFC-261)  
hydrochlorofluorocarbon-262 (HCFC-262)  
hydrochlorofluorocarbon-271 (HCFC-271)

- a. 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 Submittals: The following shall be submitted in accordance with Section 01300 SUBMITTALS:

1.3.1 SD-01 Preconstruction Submittals

- a. Preconstruction Survey;
- b. Regulatory Notifications;
- c. Environmental Management Plan;
- d. Dirt and Dust Control Plan;

- e. Contractor Hazardous Material Inventory Log;
- f. Contractor 40 CFR employee training records;
- g. Solid Waste Management Plan;

1.3.2. SD-06 Test Reports

- a. Laboratory Analysis
- b. Disposal Requirements
- c. Erosion and Sediment Control Inspection Reports
- d. Solid Waste Management Report;

1.3.3. SD-11 Closeout Submittals: Some of the records listed below are also required as part of other submittals. For the "Records" submittal, maintain on-site a separate three-ring Environmental Records binder and submit at the completion of the project. Make separate parts to the binder corresponding to each of the applicable sub items listed below:

- a. Erosion and Sedimentation Control Plan compliance notebook;
- b. Waste Determination Documentation
- c. Disposal Documentation for Hazardous and Regulated Waste
- d. Contractor 40 CFR Employee Training Records
- e. Solid Waste Management Report
- f. Contractor Hazardous Material Inventory Log;
- g. Hazardous Waste/Debris Management
- h. Regulatory Notifications

1.4 Environmental Protection Requirements: Provide and maintain, during the life of the contract, environmental protection as defined. Plan for and provide environmental protective measures to control pollution that develops during 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, State, and local regulations pertaining to the environment, including water, air, solid waste, hazardous waste and substances, oily substances, and noise pollution.

The Contractor may be required to promptly conduct tests and procedures for the purpose of assessing whether demolition operations are in compliance with Applicable Environmental Laws. Such tests shall be conducted on an as-needed basis, and the need for such tests shall be identified by the Contracting Officer. Analytical work shall be done by qualified laboratories; and where required by law, the laboratories shall be certified.

## 1.5 Quality Assurance

1.5.1 Preconstruction Survey: Perform a Preconstruction Survey of the project site with the Contracting Officer's Technical Representative, and take photographs showing existing environmental conditions in and adjacent to the site. Submit a report for the record.

1.5.2 Regulatory Notifications: The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. In cases where the United States Coast Guard must also provide public notification (such as stormwater permitting), the Contractor must coordinate with the Contracting Officer. The Contractor shall submit copies of all regulatory notifications to the Contracting Officer prior to commencement of work activities. Typically, regulatory notifications must 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).

1.5.3 Environmental Brief: Attend an environmental brief to be included in the preconstruction meeting. Provide the following information: types, quantities, and use of hazardous materials that will be brought onto the activity; types and quantities of wastes/wastewater that may be generated during the contract. Discuss the results of the Preconstruction Survey at this time.

Prior to initiating any work on site, meet with the Contracting Officer and activity environmental staff to discuss the proposed Environmental Management Plan. 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.

1.5.4 Superintendent: Appoint in writing a Superintendent for the project site. The Superintendent will be directly responsible for coordinating contractor compliance with Federal, State, local, and station requirements. The Superintendent will ensure compliance with Hazardous Waste Program requirements (including hazardous waste handling, storage, manifesting, and disposal); implement the Environmental Management Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Program Management requirements; ensure compliance with Hazardous Materials (storage, handling, and reporting) requirements; and coordinate any remediation of regulated substances (lead, asbestos, PCB transformers). This can be a collateral position; however the person in this position must 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.

- 1.5.5 Contractor 40 CFR Employee Training Records: Prepare and maintain employee training records throughout the term of the contract meeting applicable 40 CFR requirements. Submit these training records to the Contracting Officer prior to the start of the project, unless otherwise directed.

## PART 2 – PRODUCTS

Not used

## PART 3 – EXECUTION

- 3.1 Environmental Management Plan: Prior to initiating any work on site, the contractor will meet with the Contracting Officer's Technical Representative to discuss the proposed environmental management plan and develop a mutual understanding relative to the details of environmental protection, including measures for protecting natural resources, required reports, and other measures to be taken. the environmental management plan will be submitted in the following format and shall include the elements specified below.

a. Description of the Environmental Management Plan

1. General overview and purpose

- a. A brief description of each specific plan required by environmental permit or elsewhere in this contract.
- b. The duties and level of authority assigned to the person(s) on the job site that oversee environmental compliance.
- c. A copy of any standard or project specific operating procedures that will be used to effectively manage and protect the environment on the project site.
- d. Communication and training procedures that will be used to convey environmental management requirements to contractor employees and subcontractors.
- e. Emergency contact information contact information (office phone number, cell phone number, and e-mail address).

2. General site information

b. Management of Natural Resources

1. Land resources
2. Tree protection
3. Replacement of damaged landscape features
4. Temporary construction
5. Stream crossings
6. Fish and wildlife resources
7. Wetland areas

c. Protection of Historical and Archaeological Resources

1. Objectives
2. Methods

d. Storm Water Management and Control

1. Ground cover
2. Erodible soils
3. Temporary measures
  - a. Mechanical retardation and control of runoff
  - b. Vegetation and mulch
4. Effective selection, implementation and maintenance of Best Management Practices (BMPs).

e. Protection of the Environment from Waste Derived from Contractor Operations

1. Control and disposal of solid and sanitary waste. Control and disposal of hazardous waste (Hazardous Waste Management Section): The Contractor will control and dispose of hazardous wastes and universal wastes as specified in SECTION 01569 – HAZARDOUS WASTE.

f. Prevention of Releases to the Environment

1. Procedures to prevent releases to the environment
2. Notifications in the event of a release to the environment

g. Regulatory Notification and Permits: List what notifications and permit applications must be made. Demonstrate that those permits have been obtained by including copies of all applicable, environmental permits.

3.1.1 Environmental Management Plan Review: Within thirty days after the Contract award date, submit the proposed Environmental Management Plan for further discussion, review, and approval. Commencement of work will not begin until the environmental management plan has been approved.

3.1.2 Licenses and Permits: The following permits will be obtained by the Contracting Officer:

a. Erosion Control Permit

b. Federal Consistency Determination

All other licenses and permits, if necessary, shall be obtained by the Contractor pursuant to the "Permits and Responsibilities" FAR Clause 52.236-7. For permits obtained by the Contracting Officer, whether or not required by the permit, the Contractor is responsible for conforming to all permit requirements and performing all quality control inspections of the work in progress, and to submit notifications and certifications to the applicable regulatory agency via the Contracting Officer.

3.2 Protection of Natural Resources: Preserve the natural resources within the project boundaries and outside the limits of permanent work. Restore to an equivalent or improved condition upon completion of work. Confine construction activities to within the limits of the work indicated or specified. If the work is near streams, lakes, or other waterways, conform to the national permitting requirements of the Clean Water Act.

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.

Except in areas to be cleared, do not remove, cut, deface, injure, or destroy trees or shrubs without the permission of the Contracting Officer's Technical Representative. Do not fasten or attach ropes, cables, or guys to existing nearby trees for anchorages unless authorized by the Contracting Officer.

Protect existing trees, to the extent necessary. Trees may be removed to allow for safe, efficient demolition operations. Remove displaced rocks from uncleared areas. By approved excavation, remove trees with 30 percent or more of their root systems destroyed. Remove trees and other landscape features scarred or damaged by equipment operations

### 3.2.1 Erosion and Sediment Control Measures

- a. Burnoff: Burnoff of the ground cover is not permitted.
- b. Protection of Erodible Soils: Immediately finish the earthwork brought to a final grade, as indicated or specified. 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.
- c. Temporary Protection of Erodible Soils: Use the following methods to prevent erosion and control sedimentation:
  1. Mechanical Retardation and Control of Runoff: 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.
  2. Sediment Basins: Not required.
  3. Vegetation and Mulch
    - i. 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. Seeding: Provide new seeding where ground is disturbed. Include topsoil or nutriment during the seeding operation necessary to establish or reestablish a suitable stand of grass. The seeding operation will be as specified in the Erosion and Sedimentation Control Plan.

- 3.2.2 Erosion and Sediment Control Inspection Reports: Submit "Erosion and Sediment Control Inspection Reports" (E&S) (form provided at the pre-construction conference) to the Contracting Officer once every 7 calendar days and within 24 hours of a storm event that produces 0.5 inch or more of rain.

Note erosion control inspection reports may be compiled as part of a stormwater pollution prevention plan inspection reports if applicable.

- 3.2.3 Stormwater Drainage and Construction Dewatering: There will be no discharge of excavation ground water to the sanitary sewer, storm drains, or to the nearby surface water bodies. Discharge of hazardous substances will not be permitted under any circumstances.

Construction site runoff will be prevented from entering any storm drain or surface water body directly by the use of straw bales or other method suitable to the Contracting

Officer's Technical Representative. Contractor will provide erosion protection of the surrounding soils.

Construction Dewatering shall not be discharged to the sanitary sewer. If the construction dewatering is noted or suspected of being contaminated, it may only be released to the storm drain system if the discharge is specifically permitted. Discharge of hazardous substances will not be permitted under any circumstances.

- 3.3 Historical and Archaeological Resources: Carefully protect in-place and report immediately to the Contracting Officer's Technical Representative and the Contracting Officer historical and archaeological items or human skeletal remains discovered in the course of work. Upon discovery, notify the contracting officer. Stop work in the immediate area of the discovery until directed by the Contracting Officer to resume work. The government retains ownership and control over historical and archaeological resources.
- 3.4 Solid Waste Management Plan and Permit: Provide to the Contracting Officer written notification of the quantity of solid waste/debris that is anticipated to be generated by construction. Include in the report the locations where various types of waste will be disposed or recycled. Include letters of acceptance or as applicable, submit one copy of a state and local solid waste management permit or license showing such agency's approval of the disposal plan before transporting wastes off government property.
- 3.4.1 Solid Waste Management Report: Monthly, submit a solid waste disposal report to the Contracting Officer. For each waste, the report will state the classification (using the definitions provided in this section), amount, location, and name of the business receiving the solid waste.

The Contractor will include copies of the waste handling facilities' weight tickets, receipts, bills of sale, and other sales documentation. In lieu of sales documentation, the Contractor may submit a statement indicating the disposal location for the solid waste which is signed by an officer of the Contractor firm authorized to legally obligate or bind the firm. The sales documentation or Contractor certification will include the receiver's tax identification number and business, EPA or State registration number, along with the receiver's delivery and business addresses and telephone numbers. For each solid waste retained by the Contractor for his own use, the Contractor will submit on the solid waste disposal report the information previously described in this paragraph. Prices paid or received will not be reported to the Contracting Officer unless required by other provisions or specifications of this Contract or public law.

- 3.4.2 Control and Management of Solid Wastes: Pick up solid wastes, and place in covered containers which are regularly emptied. Do not prepare or cook food on the project site. Prevent contamination of the site or other areas when handling and disposing of wastes. At project completion, leave the areas clean. Recycling is encouraged and can be coordinated with the Contracting Officer's Technical Representative and the activity recycling coordinator. Remove all solid waste (including non-hazardous debris) from Government property and dispose off-site at an approved landfill. Solid waste disposal

off-site must comply with most stringent local, State, and Federal requirements including 40 CFR 241, 40 CFR 243, and 40 CFR 258.

Manage spent hazardous material used in construction, including but not limited to, aerosol cans, waste paint, cleaning solvents, contaminated brushes, and used rags, as per environmental law.

- a. Dumpsters: Equip dumpsters with a secure cover. Keep cover closed at all times, except when being loaded with trash and debris. Locate dumpsters behind the construction fence or out of the public view. Empty site dumpsters at least once per week, or as needed to keep the site free of debris and trash. If necessary, provide 55 gallon trash containers to collect debris in the construction site area. Locate the trash containers behind the construction fence or out of the public view. Empty trash containers at least once per day. For large demolitions, large dumpsters without lids are acceptable but should not have debris higher than the sides before emptying.
- 3.5 Waste Determination Documentation: Provide documentation of waste determination for all contractor derived wastes to be generated. Base the waste determination upon either a constituent listing from the manufacturer used in conjunction with consideration of the process by which the waste was generated, EPA approved analytical data, or laboratory analysis (material safety data sheets (MSDSs) by themselves are not adequate). Attach all support documentation to the waste determination form. At a minimum, waste determination documentation must be provided for the following wastes (this listing is not all inclusive): oil and latex based painting and caulking products, solvents, adhesives, aerosols, petroleum products, and all containers of the original materials.
- 3.6 Contractor Hazardous Material Inventory Log: Submit the "Contractor Hazardous Material Inventory Log"(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 at the start and at the end of construction (30 days from final acceptance), 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.
- 3.6.1 Disposal Documentation for Hazardous and Regulated Waste: Manifest, pack, ship and dispose of hazardous or toxic waste and universal waste that is generated as a result of demolition in accordance with Section 01569 HAZARDOUS WASTE.
- Submit a copy of the applicable EPA and or 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 must be reviewed, signed, and approved by the United States Coast Guard before the Contractor may ship waste.
- 3.7 Pollution Prevention/Hazardous Waste Minimization: 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 management plan. Consult with the contracting officer for suggestions for reference material when preparing this part of the plan. Describe the types of the hazardous materials expected to be used in the demolition when requesting information.

3.8 WHM/HW Materials Prohibition: No waste hazardous material or hazardous waste shall be disposed of on government property. No hazardous material shall be brought onto government property that does not directly relate to requirements for the performance of this contract. The government is not responsible for disposal of contractor's waste material brought on the job site and not required in the performance of this contract. The intent of this provision is to dispose of that waste identified as waste hazardous material/hazardous waste as defined herein that was generated as part of this contract and existed within the boundary of the contract limits and not brought in from offsite by the contractor. Incidental materials used to support the contract including, but not limited to aerosol cans, waste paint, cleaning solvents, contaminated brushes, rags, clothing, etc. are the responsibility of the contractor. The list is illustrative rather than inclusive. The contractor is not authorized to discharge any materials to sanitary sewer, storm drain, or to the river or conduct waste treatment or disposal on government property without written approval of the contracting officer.

3.9 Hazardous Material Management: No hazardous material shall be brought onto government property that does not directly relate to requirements for the performance of this contract.

Include hazardous material control procedures in the Safety 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 prior to bringing the material on base. Typical materials requiring MSDS and quantity reporting include, but are not limited to, oil and latex based painting and caulking products, solvents, adhesives, aerosol, and petroleum products. At the end of the project, provide the Contracting Officer with the maximum quantity of each material 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 provide them to the Contracting Officer at the end of the project. Certify that all hazardous materials removed from the site are hazardous materials and do not meet the definition of hazardous waste per 40 CFR 261.

3.10 Petroleum Products And Refueling: 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.

- 3.10.1 Oily and Hazardous Substances: Prevent oil or hazardous substances from entering the ground, drainage areas, or navigable waters. In accordance with 40 CFR 112, surround all temporary fuel oil or petroleum storage tanks with a temporary berm or containment of sufficient size and strength to contain the contents of the tanks, plus 10 percent freeboard for precipitation. The berm will be impervious to oil for 72 hours and be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs.
- 3.10.2 Inadvertent Discovery of Petroleum Contaminated Soil or Hazardous Wastes: If petroleum contaminated soil or suspected hazardous waste is found during construction that was not identified in the contract documents, the contractor shall immediately notify the contracting officer. The contractor shall not disturb this material until authorized by the Contracting Officer.
- 3.11 Fuel Tanks: Petroleum products and lubricants required to sustain up to 30 days of construction activity may be kept on site. Storage and refilling practices shall comply with 40 CFR Part 112. Secondary containment shall be provided and be no less than 110 percent of the tank volume plus five inches of free-board. If a secondary berm is used for containment then the berm shall be impervious to oil for 72 hours and be constructed so that any discharge will not permeate, drain, infiltrate, or otherwise escape before cleanup occurs. Drips pans are required and the tanks must be covered during inclement weather.
- 3.12 Releases/Spills of Oil and Hazardous Substances: Exercise due diligence to prevent, contain, and respond to spills of hazardous material, hazardous substances, hazardous waste, sewage, regulated gas, petroleum, lubrication oil, and other substances regulated by environmental law. Maintain spill cleanup equipment and materials at the work site. In the event of a spill, take prompt, effective action to stop, contain, curtail, or otherwise limit the amount, duration, and severity of the spill/release. In the event of any releases of oil and hazardous substances, chemicals, or gases; immediately (within 15 minutes) notify the base or activity fire department, the activity's command duty officer, and the contracting officer. If the contractor's response is inadequate, the navy may respond. If this should occur, the contractor will be required to reimburse the government for spill response assistance and analysis.

The Contractor is responsible for verbal and written notifications as required by the federal 40 CFR 355, State, local regulations and United States Coast Guard Instructions. Spill response will be in accordance with 40 CFR 300 and applicable State and local regulations. Contain and clean up these spills without cost to the Government. If Government assistance is requested or required, the Contractor will reimburse the Government for such assistance. Provide copies of the written notification and documentation that a verbal notification was made within 20 days.

Maintain spill cleanup equipment and materials at the work site. Clean up all hazardous and non-hazardous (WHM) waste spills. The Contractor shall reimburse the government for all material, equipment, and clothing generated during any spill cleanup. 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, for Contractor responsible spills, when:

- a. The Contractor has not begun spill cleanup procedure within one hour of spill discovery/occurrence, or
- b. If, in the government's judgment, the Contractor's spill cleanup is 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: Not applicable.

3.13.2 Hazardous Waste/Debris Management: Identify all construction activities 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, State, and local regulations including 40 CFR 261, 40 CFR 262, 40 CFR 263, 40 CFR 264, 40 CFR 265, 40 CFR 266, and 40 CFR 268.

Hazardous waste will also be managed in accordance with the approved Waste Management Plan described in Section 01741 CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT. Store hazardous wastes in approved containers in accordance with 49 CFR 173 and 49 CFR 178. Hazardous waste generated within the confines of Government facilities will be identified as being generated by the Government.

Prior to removal of any hazardous waste from Government property, all hazardous waste manifests must be signed by the COTR (or authorized and documented agent). No hazardous waste will be brought onto Government property. Provide to the Contracting Officer 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. For hazardous wastes spills, verbally notify the Contracting Officer and Contracting Officer's Technical Representative immediately. Provide written notification to the Contracting Officer within 24 hours.

- a. Regulated Waste Storage/Satellite Accumulation/90 Day Storage Areas: 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 90 Day Storage Area at the point of generation. The Contractor must 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)

Attach a waste determination form. Allow ten working days for processing this request. The designated area where waste is being stored shall be barricaded and a sign identifying as follows:

"DANGER - UNAUTHORIZED PERSONNEL KEEP OUT"

b. Sampling and Analysis of HW

1. 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.
2. Laboratory Analysis: Follow the analytical procedure and methods in accordance with the 40 CFR 261. The Contractor will provide all analytical results and reports performed to the Contracting Officer
3. 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.

c. Asbestos Certification: Items, components, or materials disturbed by or included in work under this contract do involve asbestos. Other materials in the general area around where work will be performed may contain asbestos. All thermal insulation, in all work areas, should be considered to be asbestos unless positively identified by conspicuous tags or previous laboratory analysis certifying them as asbestos free.

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 the contract documents, 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 for resolution of the situation prior to resuming normal work activities in the affected area. The Contractor will not remove or perform work on any asbestos containing materials without the prior approval of the Contracting Officer. The Contractor will not engage

in any activity, which would remove or damage such materials or cause the generation of fibers from such materials.

Asbestos containing waste shall be managed and disposed of in accordance with applicable environmental law and Section 02821 ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIAL. Asbestos containing waste shall be manifested and the manifest provided to the Contracting Officer.

- d. Hazardous Waste Disposal: No hazardous, toxic, or universal waste shall be disposed or hazardous material abandoned on government property. And unless otherwise noted in this contract, the government is not responsible for disposal of Contractor generated waste material. The disposal of incidental materials used to accomplish the work including, but not limited to aerosol cans, waste paint, cleaning solvents, contaminated brushes, rags, clothing, etc. are the responsibility of the Contractor. The list is illustrative rather than inclusive.

The Contractor is not authorized to discharge any materials to sanitary sewer, storm drain, or water way or conduct waste treatment or disposal on government property without written approval of the Contracting Officer.

Control of stored waste, packaging, sampling, analysis, and disposal will be determined by the details in the contract. The requirements for jobs in the following paragraphs will be used as the guidelines for disposal of any hazardous waste generated.

1. Responsibilities for Contractor's Disposal: Contractor responsibilities include any generation of WHM/HW requiring Contractor disposal of solid waste or liquid.
  - a. The Contractor agrees to provide all service necessary for the final treatment/disposal of the hazardous material/waste in accordance with all local, State and Federal laws and regulations, and the terms and conditions of the contract within sixty (60) days after the materials have been generated. These services will include all necessary personnel, labor, transportation, packaging, detailed analysis (if required for disposal, and/or transportation, including manifesting or completing waste profile sheets, equipment, and the compilation of all documentation is required).
  - b. 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.
  - c. Obtaining a representative sample of the material generated for each job done to provide waste stream determination.
  - d. Analyzing for each sample taken and providing analytical results to the Contracting Officer. Provide two copies of the results.
  - e. Determine the DOT proper shipping names for all waste (each container requiring disposal) and will demonstrate how this determination is developed

and supported by the sampling and analysis requirements contained herein to the Contracting Officer.

- e. Contractor Disposal Turn-In Requirements: For any waste hazardous materials or hazardous waste generated which requires the Contractor to dispose of, the following conditions must be complied with in order to be acceptable for disposal:
  - 1. Drums compatible with waste contents and drums meet DOT requirements for 49 CFR 173 for transportation of materials.
  - 2. Drums banded to wooden pallets. No more than three (3) 55 gallon drums to a pallet, or two (2) 85 gallon over packs.
  - 3. Band using 1-1/4 inch minimum band on upper third of drum.
  - 4. Recovery materials label (provided by Code 106.321) located in middle of drum, filled out to indicate actual volume of material, name of material manufacturer, other vendor information as available.
  - 5. Always have three (3) to five (5) inches of empty space above volume of material. This space is called 'outage'.

3.13.3 Class I and II ODS Prohibition: Class I and II ODS as defined and identified herein will not be used in the performance of this contract, nor be provided as part of the 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.

Heating and air conditioning technicians must be certified through an EPA-approved program. Copies of certifications shall be maintained at the employees' place of business and be carried as a wallet card by the technician, as provided by environmental law. Accidental venting of a refrigerant is a release and shall be reported to the Contracting Officer.

- a. Universal Waste/e-Waste Management: Universal waste including but not limited to some 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, shall be managed in accordance with applicable environmental law and installation instructions.
- 3.14 Dust Control: Keep dust down at all times, including during nonworking periods. Sprinkle or treat, with dust suppressants, the soil at the site, haul roads, and other areas disturbed by operations. Dry power brooming will not be permitted. Instead, use vacuuming, wet mopping, wet sweeping, or wet power brooming. Air blowing will be permitted only for cleaning non-particulate debris such as steel reinforcing bars. Only

wet cutting will be permitted for cutting concrete blocks, concrete, and bituminous concrete. Do not unnecessarily shake bags of cement, concrete mortar, or plaster.

- 3.14.1 **Dirt and Dust Control Plan:** Submit truck and material haul routes along with a plan for controlling dirt, debris, and dust on base roadways. As a minimum, identify in the plan the subcontractor and equipment for cleaning along the haul route and measures to reduce dirt, dust, and debris from roadways.
- 3.15 **Noise:** Make the maximum use of low-noise emission products, as certified by the EPA. Blasting or use of explosives will not be permitted without written permission from the contracting officer, and then only during the designated times.
- 3.16 **Mercury Materials:** Mercury is prohibited in the construction of this facility, unless specified otherwise, and with the exception of mercury vapor lamps and fluorescent lamps. Dumping of mercury-containing materials and devices such as mercury vapor lamps, fluorescent lamps, and mercury switches, in rubbish containers is prohibited. Remove without breaking, pack to prevent breakage, and transport out of the activity in an unbroken condition for disposal as directed. Immediately report to the contracting officer instances of breakage or mercury spillage. Clean mercury spill area to the satisfaction of the Contracting Officer's Technical Representative.

Cleanup of a mercury spill shall not be recycled and shall be managed as a hazardous waste for disposal.

## SECTION 01620 STAGING AREAS AND ACCESS

1. **LOCATION:** The Contractor shall store materials and operate equipment within the confines of the staging area identified by the Government. Storage of materials outside of the staging area will not be permitted.
2. **COORDINATION:** Two weeks prior to construction, the Contractor shall contact the Supervisor, U.S. Coast Guard Sector Field Office Cape Hatteras, at 252-441-0300, to verify the condition of the staging area..
3. **ADJACENT AREAS:** The Contractor shall ensure that all land and vegetation adjacent to the staging area and access drive remain undisturbed and undamaged; all damages shall be repaired at no cost to the Government.

SECTION 01650  
RECOVERED MATERIALS NOTICE

1. GENERAL: It is the intent of CEU Cleveland to comply with the requirements of Section 6002 of the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act (RCRA or the Act) as amended, 42 U.S.C. 6962 and Executive Order 12873 as they apply to the procurement of the materials designated in paragraph 2.
2. DESIGNATED RECOVERED MATERIALS It is the purpose of this section to designate items that are or can be made with recovered materials. These designated items can be found at <http://www.epa.gov/epaoswer/non-hw/procure/products.htm> .
3. CONTRACTOR RESPONSIBILITY: The contractor should provide recycled materials to the extent practical, provided the materials meet all other requirements of the applicable specification section.

SECTION 01720  
AS BUILT DRAWINGS

1. GENERAL: Maintain one full size set of contract drawings to record variations from the original design. **All deviations shall be neatly and clearly marked in RED** on these drawings to show work and/or materials actually provided. As Built drawings shall be **updated** as work progresses and kept at the work site for the duration of the contract. These drawings shall be available for Contracting Officer's Technical Representative review upon request.
2. DISCOVERED UTILITIES: Indicate the exact location of any **underground utility lines discovered in the course of the work** on the As-Built drawings.
3. PERMITTED VARIATIONS: As Built drawings shall reflect the actual construction and materials provided when alternative materials or work methods are allowed in the specifications and/or drawings or if the scope is altered by award of bid items, subsequent changes or modifications.
4. STANDARDS: Variations shown on As Built drawings shall be neat, clear and conform to standard drafting practices. Mark-ups shall include supplementary notes, legends, and details necessary to convey the exact representation of construction actually provided. **To comply with Computer Assisted Design (CAD) practices, only full size AS BUILT drawings are acceptable.**
5. SUBMITTAL: Submit As Built drawings for Contracting Officer's Technical Representative acceptance upon completion of the contract. **Final payment will not be until all required As Built drawings are accepted.** Maximum retention shall be withheld for late or incomplete As Built drawings.

SECTION 01741  
CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT

PART 1 – GENERAL

- 1.1 Government Policy: Government policy is to apply sound environmental principles in the design, construction and use of facilities. As part of the implementation of that policy: (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 incinerators and to facilitate their recycling or reuse.
- 1.2 Management: Take a pro-active, responsible role in the management of construction and demolition waste and require all subcontractors, vendors, and suppliers to participate in the effort. Construction and demolition waste includes products of demolition or removal, excess or unusable construction materials, packaging materials for construction products, and other materials generated during the construction process but not incorporated into the work. In the management of waste consideration shall be given to the availability of viable markets, the condition of the material, the ability to provide the material in suitable condition and in a quantity acceptable to available markets, and time constraints imposed by internal project completion mandates. The Contractor is responsible for implementation of any special programs involving rebates or similar incentives related to recycling of waste. Revenues or other savings obtained for salvage, or recycling accrue to the Contractor. Appropriately permit firms and facilities used for recycling, reuse, and disposal for the intended use to the extent required by federal, state, and local regulations. Also, provide on-site instruction of appropriate separation, handling, recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- 1.3 Submittals: The following shall be submitted in accordance with Section 01300 SUBMITTALS:
  - 1.3.1. SD-01 Preconstruction Submittals
    - a. Waste Management Plan;
  - 1.3.2. SD-11 Closeout Submittals
    - a. Records
- 1.4 Meetings: Conduct Construction Waste Management meetings. After award of the Contract and prior to commencement of work, schedule and conduct a meeting with the Contracting Officer to discuss the proposed Waste Management Plan and to develop a mutual understanding relative to the details of waste management. The requirements for this meeting shall be fulfilled during Pre-Demolition Meeting outlined in Section 01200 PROJECT MEETINGS. At a minimum, environmental and waste management goals and issues shall be discussed at the following additional meetings:

- a. Regular site meetings.
  - b. Work safety meetings.
- 1.5 Waste Management Plan: A waste management plan shall be submitted within 30 days after contract award and not less than 10 days before the pre-demolition meeting. The plan shall demonstrate how the project waste diversion goal shall be met and shall include the following:
- a. Name of individuals on the Contractor's staff responsible for waste prevention and management.
  - b. Actions that will be taken to reduce solid waste generation, including coordination with subcontractors to ensure awareness and participation.
  - c. Description of the regular meetings to be held to address waste management.
  - d. Description of the specific approaches to be used in recycling/reuse of the various materials generated, including the areas on site and equipment to be used for processing, sorting, and temporary storage of wastes.
  - e. Characterization, including estimated types and quantities, of the waste to be generated.
  - f. Name of landfill and/or incinerator to be used and the estimated costs for use, assuming that there would be no salvage or recycling on the project.
  - g. Identification of local and regional reuse programs, including non-profit organizations such as schools, local housing agencies, and organizations that accept used materials such as materials exchange networks and Habitat for Humanity. Include the name, location, and phone number for each reuse facility to be used, and provide a copy of the permit or license for each facility.
  - h. List of specific waste materials that will be salvaged for resale, salvaged and reused on the current project, salvaged and stored for reuse on a future project, or recycled. Recycling facilities that will be used shall be identified by name, location, and phone number, including a copy of the permit or license for each facility.
  - i. Identification of materials that cannot be recycled/reused with an explanation or justification, to be approved by the Contracting Officer.
  - j. Description of the means by which any waste materials identified in item (h) above will be protected from contamination.
  - k. Description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether

mixed materials will be collected by a waste hauler and removed from the site).

- I. Anticipated net cost savings determined by subtracting Contractor program management costs and the cost of disposal from the revenue generated by sale of the materials and the incineration and/or landfill cost avoidance.

Revise and resubmit Plan as required by the Contracting Officer. Approval of Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations or meeting project cumulative waste diversion requirement. Distribute copies of the Waste Management Plan to each subcontractor and the Contracting Officer.

- 1.6 Records: Records shall be maintained to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. The records shall be made available to the Contracting Officer and the Contracting Officer's Technical Representative during construction and a copy of the records shall be delivered to the Contracting Officer upon completion of the construction.

- 1.7 Collection: Separate, store, protect, and handle at the site identified recyclable and salvageable waste products in a manner that maximizes recyclability and salvageability of identified materials. Provide the necessary containers, bins and storage areas to facilitate effective waste management and clearly and appropriately identify them. Provide materials for barriers and enclosures around recyclable material storage areas which are nonhazardous and recyclable or reusable. Locate out of the way of construction traffic. Provide adequate space for pick-up and delivery and convenience to subcontractors. Recycling and waste bin areas are to be kept neat and clean, and recyclable materials shall be handled to prevent contamination of materials from incompatible products and materials. Clean contaminated materials prior to placing in collection containers. Use cleaning materials that are nonhazardous and biodegradable. Handle hazardous waste and hazardous materials in accordance with applicable regulations and coordinate with Section 01569 HAZARDOUS WASTE. Separate materials by one of the following methods:

- 1.7.1 Source Separated Method: Waste products and materials that are recyclable shall be separated from trash and sorted as described below into appropriately marked separate containers and then transported to the respective recycling facility for further processing. Deliver materials in accordance with recycling or reuse facility requirements (e.g., free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process). Separate materials into the following category types as appropriate to the project waste and to the available recycling and reuse programs in the project area:

- a. Land clearing debris.
- b. Asphalt.

- c. Concrete and masonry.
- d. Metal (e.g. banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized, stainless steel, aluminum, copper, zinc, lead brass, bronze).
  - 1. Ferrous.
  - 2. Non-ferrous.
- e. Wood (nails and staples allowed).
- g. Debris.
- g. Glass (colored glass allowed).
- h. Paper.
  - 1. Bond.
  - 2. Newsprint.
  - 3. Cardboard and paper packaging materials.
- i. Plastic.
  - 1. Type 1: Polyethylene Terephthalate (PET, PETE).
  - 2. Type 2: High Density Polyethylene (HDPE).
  - 3. Type 3: Vinyl (Polyvinyl Chloride or PVC).
  - 4. Type 4: Low Density Polyethylene (LDPE).
  - 5. Type 5: Polypropylene (PP).
  - 6. Type 6: Polystyrene (PS).
  - 7. 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. Carpet.
- m. Ceiling tiles.
- n. Insulation.
- o. Beverage containers.

1.7.2 Co-Mingled Method: Waste products and recyclable materials shall be placed into a

single container and then transported to a recycling facility where the recyclable materials are sorted and processed.

- 1.7.3 Other Methods: Other methods proposed by the Contractor may be used when approved by the Contracting Officer.
- 1.8 Disposal: Control accumulation of waste materials and trash. Recycle or dispose of collected materials off-site at intervals approved by the Contracting Officer and in compliance with waste management procedures. Except as otherwise specified in other sections of the specifications, disposal shall be in accordance with the following:
  - 1.8.1 Reuse: First consideration shall be given to salvage for reuse since little or no re-processing is necessary for this method, and less pollution is created when items are reused in their original form. Coordinate reuse with the Contracting Officer's Technical Representative.
  - 1.8.2 Recycle: Waste materials not suitable for reuse, but having value as being recyclable, shall be made available for recycling. All fluorescent lamps, high-intensity discharge lamps, and mercury-containing thermostats removed from the site shall be recycled. Arrange for timely pickups from the site or deliveries to recycling facilities in order to prevent contamination of recyclable materials.
  - 1.8.4 Waste: Materials with no practical use or economic benefit shall be disposed at a landfill or incinerator.
  - 1.8.5 Return: Set aside and protect misdelivered and substandard products and materials and return to supplier for credit.

## PART 2 – PRODUCTS

Not Used

## PART 3 – EXECUTION

Not Used

END OF SECTION 01741

**LIST OF SUBMITTALS**

SECT	PARA	ITEM	GENERAL USE COLUMN
01030	1	Preconstruction Survey	
01040	5.3	Superintendent Resume	
	7.7	Form DHS 3768	
	7.8	LBP Abatement Permit	
01310	1.a	Construction Schedule	
	1.b	Schedule of Values	
	2	Progress Schedule	
01540	3	Safety Plan	
01541	1	Lockout/Tagout Plan	
01542	1	MSDS	
01543	1	Confined Space Entry Plan	
01567	1.1	State Implementation Documentation	
	1.2	Notarized Letter	
	1.3	VOC rating documentation	
	2	Spill Response Plan	
01569	7	Hazardous Waste Documents	
01579	3.13.2	Laboratory Analysis	
	(b) 2		
	3.6.1	Disposal Requirements	
	3.2.2	Erosion and Sediment Control Inspection Report	
	3.4.1	Solid Waste Management Report	
	3.2.2	Erosion and Sedimentation Control Plan compliance notebook	
	3.5	Waste Determination Documentation	
	3.6.1	Disposal Documentation for Hazardous and Regulated Waste	
	3.13.2	Hazardous Waste/Debris Management	
	1.5.1	Preconstruction Survey	
	1.5.2	Regulatory Notifications	
	1.5.5	Contractor 40-Hour Training Certificates	
	3.1	Environmental Management Plan	
	3.4	Solid Waste Management Plan	
	3.6	Contractor Hazardous Material Inventory Log	
	3.14.1	Dirt and Dust Control Plan	
01720	5.1	As-Built Drawings	
01741	1.6	Records	
	1.5	Waste Management Plan	
02410	1.2.1	Demolition Plan	
	1.7	Notifications	

	3.5.1	Closeout Submittals – Receipts	
02821	1.2.2	Product Data – Amended Water	
	1.3.2.2	Certificates – Medical Certifications	
	1.3.4	Certificates – Asbestos Worker's License	
	1.3.4	Certificates – Asbestos Supervisor's License	
	1.3.6	Certificates – Respiratory Protection Program	
	1.3.9	Preconstruction Submittals – Asbestos Hazard Abatement Plan	
	1.3.10	Certificates – Testing laboratory Certifications	
	1.3.11	Certificates – Landfill Approval	
	1.5.1	Certificates – Private Qualified Person Documentation	
	1.5.1	Certificates – Qualified Person Documentation	
	1.5.4	Certificates – Contractor's License	
	1.5.5	Test Reports – Daily Air Sampling Results	
	1.5.6	Test Reports – Pressure Differential Recordings for Negative Pressure Enclosure	
	2.1.2	Product Data – Polyethylene Sheeting	
	2.1.2	Product Data – Local Exhaust Equipment	
	2.1.3	Closeout Submittals – Delivery Tickets	
	2.1.4	Product Data – Encapsulants	
	3.2.7.3	Closeout Submittals – Final Clearance Certifications	
	3.3.3.2	Test Reports – Asbestos Disposal Quantity Report	
	3.3.3.2	Closeout Submittals – Waste Shipment Records	
	3.1	Certificates –Other equipment used to contain airborne asbestos fibers	
	3.1.1	Product Data – Respirators	
	3.1.5	Product Data – Pressure Differential Automatic Recording Instruments	
	3.1.6	Product Data – Vacuums	
	3.1.8	Product Data – Glovebags	
	3.2.7c	Test Reports – Clearance Sampling	
	3.1.3	Certificates – Water Filtration Equipment	
	3.3.3b	Closeout Submittals – Contractor Daily Field Reports	
	None	Certificates –NESHAPS Notifications	
	None	Product Data – MSDSs	

02831	1.5.1.1	Preconstruction Submittals – Competent person qualifications	
	1.5.1.1	Certificates – Third Party Consultant CP Qualifications/Certifications	
	1.5.1.2	Preconstruction Submittals – Training certifications	
	1.5.1.3	Certificates – Testing laboratory Qualifications/Certifications	
	1.5.2.2	Preconstruction Submittals – Lead Compliance Plan	
	3.4	Test Results – Personal and Area Air Sampling Results	
	3.6.3	Preconstruction Submittals – Waste profiles	
	3.6.3	Closeout Submittals – Disposal Documentation	
31230	1.6	Borrow Site Testing	

**CONTRACT ITEM ACCEPTANCE REQUEST**

**Contract Number: HSCG83-**

**DO/TO: HSCG83-**

**Contract Specialist:**

**Project Number:**

**Contractor Name:**

**URGENT YES NO (if yes) CONTRACTOR FAX #: \_\_\_\_\_**

**Submittal # \_\_\_\_\_ Job Location: \_\_\_\_\_**

**NOTE: Contractor must mark Deviation column if submittal deviates from contract requirements**

<b>Item No.</b>	<b>Spec Section and Paragraph</b>	<b>Description of Material Include Type, Model #, Manufacturer, Etc.</b>	<b>Deviation</b>	<b>Status</b>

**STATUS ABBREVIATION GUIDE:**

- AC - Accepted
- AC w/ CMT - Accepted with Comment
- R-Resubmit
- Comments:**

Typed Name & Title	Signature	Date
--------------------	-----------	------

**NOTE:** Review and acceptance of submittals by the Government is intended to verify general conformance with the design intent as shown on the contract drawings and in the specifications. Acceptance by the Contracting Officer's Technical Representative does not relieve the Contractor of responsibility for any errors and/or omissions in the submittals, nor from the responsibility for complying with the requirements of the contract, except with respect to variations described and approved in accordance with FAR 52.243-4 CHANGES.

SECTION 02410  
DEMOLITION

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.

AIR-CONDITIONING, HEATING AND REFRIGERATION INSTITUTE (AHRI)  
AHRI Guideline K (2009) Guideline for Containers for Recovered Non-Flammable Fluorocarbon Refrigerants

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)  
AASHTO M 145 (1991; R 2008) Standard Specification for Classification of Soils and Soil-Aggregate Mixtures for Highway Construction Purposes  
AASHTO T 180 (2010) Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

AMERICAN PETROLEUM INSTITUTE (API)  
API 1604 (1996; R 2001) Closure of Underground Petroleum Storage Tanks  
API 2015 (2001; R 2006) Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks

AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE/SAFE)  
ASSE/SAFE A10.6 (2006) Safety Requirements for Demolition Operations

CARPET AND RUG INSTITUTE (CRI)  
CRI 104 (2002) Standard for Installation Specification of Commercial Carpet

U.S. ARMY CORPS OF ENGINEERS (USACE)  
EM 385-1-1 (2008; Change 1-2010; Change 3-2010; Errata 1-2010) Safety and Health Requirements Manual

U.S. COAST GUARD (USCG)  
COMDTINST M5090.9 (1995) Storage Tank Management Manual

U.S. DEFENSE LOGISTICS AGENCY (DLA)  
DLA 4145.25 (June 2000) Storage and Handling of Liquefied and Gaseous Compressed Gases and Their Full and Empty Cylinders

U.S. DEPARTMENT OF DEFENSE (DOD)

DOD 4000.25-1-M (2006) MILSTRIP - Military Standard Requisitioning and Issue Procedures  
MIL-STD-129 (2007; Rev P; Change 4 2007) Military Marking for Shipment and Storage

U.S. FEDERAL AVIATION ADMINISTRATION (FAA)

FAA AC 70/7460-1 (2007; Rev K) Obstruction Marking and Lighting

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

40 CFR 61 National Emission Standards for Hazardous Air Pollutants  
40 CFR 82 Protection of Stratospheric Ozone  
49 CFR 173.301 Shipment of Compressed Gases in Cylinders and Spherical Pressure Vessels

1.2 Project Description

- 1.2.1 Demolition Plan: Prepare a Demolition Plan and submit proposed salvage, demolition, and removal procedures for approval before work is started. Include in the 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, 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 with reference to paragraph Existing Facilities to be Removed. Append tracking forms for all removed materials indicating type, quantities, condition, destination, and end use. Coordinate with Waste Management Plan. Provide procedures for safe conduct of the work in accordance with EM 385-1-1. Plan shall be approved by Contracting Officer's Technical Representative prior to work beginning.
- 1.2.2 General Requirements: Do not begin demolition or deconstruction until authorization is received from the Contracting Officer. The work of this section is to be performed in a manner that maximizes salvage and recycling of materials. The work includes demolition, salvage of identified items and materials, and removal of resulting rubbish and debris. Remove rubbish and debris from Government property daily, unless otherwise directed. Store materials that cannot be removed daily in areas specified by the Contracting Officer. In the interest of occupational safety and health, perform the work in accordance with EM 385-1-1, Section 23, Demolition, and other applicable Sections.
- 1.3 Items to Remain in Place: 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 as approved by the Contracting Officer's Technical Representative. Coordinate the work of this section with all other work indicated. Do not overload pavements to remain. Items to remain include the following:

- 1.3.1 Asphalt pavement
- 1.3.2 Underground communication line servicing High Frequency Antenna Shed
- 1.3.3 Concrete weather station pole
- 1.3.4 NOAA antenna and shed and surface communication line to NOAA antenna
- 1.3.5 Underground and overhead utilities servicing the NOAA antenna and shed
- 1.3.6 Other buried utilities not within five feet of buildings, except for surface expressions of the buried utilities
- 1.4 Existing Construction Limits and Protection: Do not disturb existing construction beyond the extent indicated. 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.
- 1.5 Trees: Protect trees within the project site which do not impede demolition activities. Erect a temporary tree-protection fence a minimum of 5 feet from the trunk of individual trees or follow the outer perimeter of branches or clumps of trees, whichever is greater.
- 1.6 Utility Service: Maintain existing utilities indicated 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 de-energized by the Contractor.
- 1.7 Facilities: Floors, roofs, walls, columns, pilasters, and other structural components that might be rendered unstable by demolition activities, must be supported and secured by bracing, shoring, or adding lateral supports as may be required as a result of cutting, removal, deconstruction, or demolition work. The supports shall remain in place until the structural components are demolished or deconstructed, unless directed otherwise by the Contracting Officer's Technical Representative.
- 1.8 Burning: The use of burning at the project site for the disposal of refuse and debris will not be permitted.
- 1.9 Availability of Work Areas: Areas in which the work is to be accomplished will be discussed during the Pre-Demolition Meeting discussed in Section 01200 PROJECT MEETINGS.
- 1.10 Submittals: Submit the following in accordance with Section 01300 SUBMITTALS:
  - 1.10.1 SD-01 Preconstruction Submittals
    - a. Demolition Plan
    - b. Notifications

## 1.10.2 SD-11 Closeout Submittals

### a. Receipts

- 1.11 Quality Assurance: Submit timely notification of demolition projects to Federal, State, regional, and local authorities in accordance with 40 CFR 61, Subpart M. Notify Dare County and the Contracting Officer in writing 10 working days prior to the commencement of work in accordance with 40 CFR 61, Subpart M. Comply with federal, state, and local hauling and disposal regulations. In addition to the requirements of the "Contract Clauses," conform to the safety requirements contained in ASSE/SAFE A10.6. Comply with the Environmental Protection Agency requirements specified. Use of explosives will not be permitted.
- 1.11.1 Dust and Debris Control: Prevent the spread of dust and debris and avoid the creation of a nuisance in the surrounding area. Do not use water if it results in hazardous or objectionable conditions such as, but not limited to, ice, flooding, or pollution.
- 1.12 Protection
- 1.12.1 Traffic Control Signs: Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights. Anchor barricades in a manner to prevent displacement by wind. Notify the Contracting Officer's Technical Representative prior to beginning such work.
- 1.12.2 Protection of Personnel: Before, during and after the demolition work continuously evaluate the condition of the structure being demolished and take immediate action to protect all personnel working in and around the project site. No area, section, or component of floors, roofs, walls, columns, pilasters, or other structural element will be allowed to be left standing without sufficient bracing, shoring, or lateral support to prevent collapse or failure while workmen remove debris or perform other work in the immediate area.
- 1.13 Relocations: Perform the removal and reinstallation of relocated items as indicated with workmen skilled in the trades involved. Repair or replace items to be relocated which are damaged by the Contractor with new undamaged items as approved by the Contracting Officer's Technical Representative.
- 1.14 Existing Conditions: Before beginning any demolition or deconstruction work, perform a Preconstruction Survey in accordance with Section 01030 PRE-CON SITE CONDITIONS and Section 01579 TEMPORARY ENVIRONMENTAL CONTROLS. Submit survey results to the Contracting Officer.

## PART 2 – PRODUCTS

### 2.1 Fill Material

- 2.1.1. Comply with excavating, backfilling, and compacting procedures for soils used as backfill material to fill basements, voids, depressions or excavations resulting from demolition or deconstruction of structures.
- 2.1.2. Fill material shall conform to the definition of satisfactory soil material as defined Section 31230 EXCAVATION AND FILL.
- 2.1.3. Proposed fill material must be sampled and tested as specified in Section 31230 EXCAVATION AND FILL.

## PART 3 – EXECUTION

3.1 Existing Facilities to Be Removed: Inspect and evaluate components of existing structures onsite for recycle and reuse. Existing construction scheduled to be removed for reuse shall be disassembled. Dismantled and removed materials are to be separated, set aside, and prepared as specified, and stored or delivered to a collection point for reuse, remanufacture, recycling, or other disposal, as specified.

### 3.1.1 Structures

- a. Entirely remove existing structures indicated to be removed, including foundations and concrete slabs. Remove granular, non-native slab sub-base material entirely or to a depth of 1 ft. below ground surface, whichever is less.. Remove sidewalks as indicated.
- b. Demolish structures in a systematic manner from the top of the structure to the ground. Complete demolition work above each tier or floor before the supporting members on the lower level are disturbed. Demolish concrete and masonry walls in small sections. Remove structural framing members and lower to ground by means of derricks, platforms hoists, or other suitable methods as approved by the Contracting Officer's Technical Representative. Blasting and/or use of a wrecking ball are not permitted.
- c. Locate demolition and deconstruction equipment throughout the structure and remove materials so as to not impose excessive loads to supporting walls, floors, or framing.

### 3.1.2 Utilities and Related Equipment

- a. General Requirements: Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by the Contracting Officer's Technical Representative. Do not interrupt existing utilities serving facilities occupied and used by the Government except when approved in writing and then only after temporary

utility services have been approved and provided. Do not begin demolition or deconstruction work until all utility disconnections have been made. Shut off and cap utilities for future use, as indicated. Overhead utility lines and underground water line located along Old Lighthouse road are to remain in service and protected during demolition activities.

- b. De-energize Existing Utilities: Contractor shall permanently de-energize all energized or potentially energized utilities in the work area prior to demolition work. Contractor shall verify that utilities are de-energized before demolition or removing components of the utility.
  - c. Disconnecting Existing Utilities: Remove existing underground utilities to within 5 feet of the former building foundations and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer's Technical Representative. Remove all subsurface utility vaults, manholes, handholes, valve boxes and similar infrastructure and terminate in a manner conforming to the nationally recognized code covering the specific utility and approved by the Contracting Officer's Technical Representative. Light poles associated with the Ball Field shall be removed. Overhead utility lines and underground water line located along Old Lighthouse road are to remain. When utility lines are encountered but are not indicated on the drawings, notify the Contracting Officer's Technical Representative prior to further work in that area. Remove meters and related equipment and deliver to a location in accordance with instructions of the Contracting Officer's Technical Representative.
- 3.1.3 Chain Link Fencing: Existing chain link fencing will be repaired and maintained prior to and during demolition activities. Following the establishment of permanent vegetation, perimeter chain link fencing shall be removed, with the exception of fencing along the northern boundary of the site. Remove chain link fencing, gates and other related salvaged items scheduled for removal and transport to designated areas. Remove gates as whole units. Cut chain link fabric to 25 foot lengths and store in rolls off the ground.
- 3.1.4 Paving and Slabs: Remove concrete and asphaltic concrete paving and slabs including aggregate bases indicated to a depth of 12 inches below existing adjacent grade. Provide neat saw cuts at limits of pavement removal as indicated. Concrete associated with the swimming pool shall be removed in its entirety.
- 3.1.5 Roofing: Remove existing roof system and associated components in their entirety down to existing roof deck. Salvage asphalt roofing materials.
- 3.1.6 Structural Steel: Dismantle or demolish structural steel in a manner that protects the safety of the work crew. Salvage for recycle structural steel, steel joists, girders, angles, plates, columns and shapes. Flame-cutting torches are permitted when other methods of dismantling are not practical. Transport steel joists, girders and shapes to a designated recycling facility.
- 3.1.7 Miscellaneous Metal: Salvage shop-fabricated items such as access doors and frames,

steel gratings, metal ladders, wire mesh partitions, metal railings, metal windows and similar items as whole units. Salvage light-gage and cold-formed metal framing, such as steel studs, steel trusses, metal gutters, roofing and siding, metal toilet partitions, toilet accessories and similar items. Scrap metal shall become the Contractor's property. Recycle scrap metal as part of demolition and deconstruction operations. Provide separate containers to collect scrap metal and transport to a scrap metal collection or recycling facility, in accordance with the Waste Management Plan.

- 3.1.8 Carpentry: Salvage for recycle lumber, millwork items, and finished boards, and sort by type and size. Remove windows, doors, frames, and cabinets, and similar items as whole units, complete with trim and accessories. Brace the open end of door frames to prevent damage.
- 3.1.9 Carpet: Remove existing carpet for reclamation in accordance with manufacturer recommendations and as follows. Remove used carpet in large pieces, roll tightly, and pack neatly in a container. Remove adhesive according to recommendations of the Carpet and Rug Institute (CRI). Adhesive removal solvents shall comply with CRI 104. Recycle removed carpet cushion.
- 3.1.10 Acoustic Ceiling Tile: Remove, neatly stack, and recycle acoustic ceiling tiles. Recycling may be available with manufacturer. Otherwise, priority shall be given to a local recycling organization.
- 3.1.11 Air Conditioning Equipment: Remove air conditioning, refrigeration, and other equipment containing refrigerants without releasing chlorofluorocarbon refrigerants to the atmosphere in accordance with the Clean Air Act Amendment of 1990. Recover all refrigerants prior to removing air conditioning, refrigeration, and other equipment containing refrigerants and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)." Turn in salvaged Class I ODS refrigerants as specified in paragraph, "Salvaged Materials and Equipment."
- 3.1.12 Cylinders and Canisters: Remove all fire suppression system cylinders and canisters and dispose of in accordance with the paragraph entitled "Disposal of Ozone Depleting Substance (ODS)."
- 3.1.13 Locksets on Swinging Doors: Remove all locksets from all swinging doors indicated to be removed and disposed of. Deliver the locksets and related items to a designated location for receipt by the Contracting Officer's Technical Representative after removal.
- 3.1.14 Mechanical Equipment and Fixtures: Disconnect mechanical hardware at the nearest connection to existing services to remain, unless otherwise noted. Disconnect mechanical equipment and fixtures at fittings. Remove service valves attached to the unit. Salvage each item of equipment and fixtures as a whole unit; listed, indexed, tagged, and stored. Salvage each unit with its normal operating auxiliary equipment. Transport salvaged equipment and fixtures, including motors and machines, to a designated storage area as directed by the Contracting Officer's Technical

Representative. Do not remove equipment until approved. Do not offer low-efficiency equipment for reuse.

- a. Preparation for Storage: Remove water, dirt, dust, and foreign matter from units; tanks, piping and fixtures shall be drained; interiors, if previously used to store flammable, explosive, or other dangerous liquids, shall be steam cleaned. Seal openings with caps, plates, or plugs. Secure motors attached by flexible connections to the unit. Change lubricating systems with the proper oil or grease.
  - b. Piping: Disconnect piping at unions, flanges and valves, and fittings as required to reduce the pipe into straight lengths for practical storage. Store salvaged piping according to size and type. If the piping that remains can become pressurized due to upstream valve failure, end caps, blind flanges, or other types of plugs or fittings with a pressure gage and bleed valve shall be attached to the open end of the pipe to ensure positive leak control. Carefully dismantle piping that previously contained gas, gasoline, oil, or other dangerous fluids, with precautions taken to prevent injury to persons and property. Store piping outdoors until all fumes and residues are removed. Box prefabricated supports, hangers, plates, valves, and specialty items according to size and type. Wrap sprinkler heads individually in plastic bags before boxing. Classify piping not designated for salvage, or not reusable, as scrap metal.
  - c. Ducts: Classify removed duct work as scrap metal.
  - d. Fixtures, Motors and Machines: Remove and salvage fixtures, motors and machines associated with plumbing, heating, air conditioning, refrigeration, and other mechanical system installations. Salvage, box and store auxiliary units and accessories with the main motor and machines. Tag salvaged items for identification, storage, and protection from damage. Classify non-ceramic broken, damaged, or otherwise unserviceable units and not caused to be broken, damaged, or otherwise unserviceable as debris to be disposed of by the Contractor. Crush ceramic plumbing fixtures unsuitable for reuse.
- 3.1.15 Electrical Equipment and Fixtures: Salvage motors, motor controllers, and operating and control equipment that is attached to the driven equipment. Salvage wiring systems and components. Box loose items and tag for identification. Disconnect primary, secondary, control, communication, and signal circuits at the point of attachment to their distribution system.
- a. Fixtures: Remove and salvage electrical fixtures. Salvage unprotected glassware from the fixture and salvage separately. Salvage incandescent, mercury-vapor, and fluorescent lamps and fluorescent ballasts manufactured prior to 1978, boxed and tagged for identification, and protected from breakage.
  - b. Electrical Devices: Remove and salvage switches, switchgear, transformers, conductors including wire and nonmetallic sheathed and flexible armored cable, regulators, meters, instruments, plates, circuit breakers, panelboards, outlet boxes, and similar items. Box and tag these items for identification according to type and size.

- c. Wiring Ducts or Troughs: Remove and salvage wiring ducts or troughs. Dismantle plug-in ducts and wiring troughs into unit lengths. Remove plug-in or disconnecting devices from the busway and store separately.
  - d. Conduit and Miscellaneous Items: Salvage conduit except where embedded in concrete or masonry. Consider corroded, bent, or damaged conduit as scrap metal. Sort straight and undamaged lengths of conduit according to size and type. Classify supports, knobs, tubes, cleats, and straps as debris to be removed and disposed.
- 3.1.16 Elevators and Hoists: Remove elevators, hoists, and similar conveying equipment and salvage as whole units, to the most practical extent. Remove and prepare items for salvage without damage to any of the various parts. Salvage and store rails for structural steel with the equipment as an integral part of the unit.
- 3.1.17 ASTs and Fueling Platform: Remove above ground storage tanks and all associated aboveground and underground piping. The above ground storage tanks shall be tested to verify that they no longer contain fuel compounds. Above ground storage tanks must be satisfactorily cleaned prior to removal and/or demolition. Remove fueling island and apron in its entirety. Testing, cleaning, demolition and disposal of AST and all associated equipment shall be in accordance with local laws and regulations and USCG COMDTINST M5090.9, API 1604 and API 2015.
- 3.1.18 Miscellaneous items: All wooden bollards and parking stops shall be removed.
- 3.1.19 Items With Unique/Regulated Disposal Requirements: Remove and dispose of items with unique or regulated disposal requirements in the manner dictated by law or in the most environmentally responsible manner.
- 3.2 Concurrent Earth-Moving Operations: Do not begin excavation, filling, and other earth-moving operations that are sequential to demolition work in areas occupied by structures to be demolished until all demolition and deconstruction in the area has been completed and debris removed. Fill holes, open basements and other hazardous openings.
- 3.3 Disposition of Material
- 3.3.1 Title to Materials: Except for salvaged items specified in related Sections, and for materials or equipment scheduled for salvage, all materials and equipment removed and not reused or salvaged, shall become the property of the Contractor and shall be removed from Government property. Title to materials resulting from demolition and deconstruction, and materials and equipment to be removed, is vested in the Contractor upon approval by the Contracting Officer of the Contractor's demolition, deconstruction, and removal procedures, and authorization by the Contracting Officer to begin demolition and deconstruction. The Government will not be responsible for the condition or loss of, or damage to, such property after contract award. Showing for sale or selling materials and equipment on site is prohibited.

- 3.3.2 Reuse of Materials and Equipment: Not applicable.
- 3.3.3 Salvaged Materials and Equipment: Remove materials and equipment that are listed in the Demolition Plan.
- a. Salvage items and material to the maximum extent possible.
  - b. Store all materials salvaged for the Contractor as approved by the Contracting Officer's Technical Representative and remove from Government property before completion of the contract. On site sales of salvaged material is prohibited.
- 3.3.4 Storage of Salvaged Materials: Separate, consolidate and stage all salvaged materials in a location that does not increase the footprint of demolition activities and that does not create a safety hazard.
- 3.3.5 Disposal of Ozone Depleting Substance (ODS): Class I and Class II ODS are defined in Section, 602(a) and (b), of The Clean Air Act. Prevent discharge of Class I and Class II ODS to the atmosphere. Place recovered ODS in cylinders meeting AHRI Guideline K suitable for the type ODS (filled to no more than 80 percent capacity) and provide appropriate labeling. Recovered ODS shall be removed from Government property and disposed of in accordance with 40 CFR 82. Products, equipment and appliances containing ODS in a sealed, self-contained system (e.g. residential refrigerators and window air conditioners) shall be disposed of in accordance with 40 CFR 82. Submit Receipts or bills of lading, as specified.
- a. Special Instructions: No more than one type of ODS is permitted in each container. A warning/hazardous label shall be applied to the containers in accordance with Department of Transportation regulations. All cylinders including but not limited to fire extinguishers, spheres, or canisters containing an ODS shall have a tag with the following information:
    1. Activity name and unit identification code
    2. Activity point of contact and phone number
    3. Type of ODS and pounds of ODS contained
    4. Date of shipment
  - b. Fire Suppression Containers: Deactivate fire suppression system cylinders and canisters with electrical charges or initiators prior to shipment. Also, safety caps must be used to cover exposed actuation mechanisms and discharge ports on these special cylinders.
- 3.3.6 Transportation Guidance: Ship all ODS containers in accordance with federal and state transportation regulations.

- 3.3.7 Unsalvageable and Non-Recyclable Material: Dispose of unsalvageable and non-recyclable material off the site.
- 3.4 Cleanup: Remove debris and rubbish from basement and similar excavations. Remove and transport the debris in a manner that prevents spillage on streets or adjacent areas. Apply local regulations regarding hauling and disposal.
- 3.5 Disposal of Removed Materials
  - 3.5.1 Regulation of Removed Materials: Dispose of debris, rubbish, scrap, and other nonsalvageable materials resulting from removal operations with all applicable federal, state and local regulations as contractually specified in the Waste Management Plan. Provide all disposal receipts to the Contracting Officer. Storage of removed materials on the project site is prohibited.
  - 3.5.2 Burning on Government Property: Burning of materials removed from demolished and deconstructed structures will not be permitted on Government property.
  - 3.5.3 Removal to Spoil Areas on Government Property: Not applicable.
  - 3.5.4 Removal from Government Property: Transport waste materials removed from demolished and deconstructed structures from Government property for legal disposal.

END OF SECTION 02410

SECTION 02741  
FLEXIBLE PAVEMENT REPAIR

PART 1 – GENERAL

1.1 References:

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

AASHTO MP 1	Standard Specification for Performance Graded Asphalt Binder
AASHTO T 245	Standard Method of Test for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus

ASPHALT INSTITUTE (AI)

AI MS-22	Construction of Hot Mix Asphalt Pavements
AI MS-2	Mix Design Methods

ASTM INTERNATIONAL (ASTM)

ASTM D8	Standard Terminology Relating to Materials for Roads and Pavements
ASTM D692	Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures
ASTM D1073	Standard Specification for Fine Aggregate for Bituminous Paving Mixtures
ASTM D242	Standard Specification for Mineral Filler For Bituminous Paving Mixtures
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures

1.2 Definitions: Refer to ASTM D8 for definitions of hot-mix asphalt paving terminology.

1.3 Requirements

1.3.1 Description of the Work: Provide hot-mix asphalt paving repair for all areas of existing asphalt pavement disturbed during demolition and removal activities. New asphalt shall match existing asphalt pavement thickness and composition.

1.4 Submittals : None

1.5 Quality Assurance

1.5.1 Manufacturer shall be a paving-mix manufacturer registered with and approved by authorities having jurisdiction or the North Carolina DOT.

- 1.5.2 Asphalt-Paving Publication: Comply with AI MS-22, unless more stringent requirements are indicated.
  - a. Review proposed sources of paving materials, including capabilities and location of plant that will manufacture hot-mix asphalt.
- 1.5.3 Review condition of subgrade and preparatory work.

## PART 2 – PRODUCTS

- 2.1. Aggregates
  - 2.1.1 General: Use materials and gradations that have performed satisfactorily in previous installations.
  - 2.1.2 Course Aggregate: ASTM D692, sound; angular crushed stone, crushed gravel, or properly cured, crushed blast-furnace slag.
  - 2.1.3 Fine Aggregate: ASTM D1073, sharp-edged natural sand or sand prepared from stone, gravel, properly cured blast-furnace slag, or combinations thereof
  - 2.1.4 Mineral Filler: ASTM D242, rock or slag dust, hydraulic cement, or other inert material.
- 2.2. Asphalt Materials
  - 2.2.1 Asphalt Binder: ASSHTO MP 1
  - 2.2.2 Asphalt Cement: ASTM D3381 for viscosity-graded material
  - 2.2.3 Water: Potable

## PART 3 – EXECUTION

- 3.1 Project Conditions
  - 3.1.1 Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp or if the following conditions are not met:
    - a. Asphalt Base Course: Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement.
    - b. Asphalt Surface Course: Minimum surface temperature of 60 deg F (15.5 deg C) at time of placement.
- 3.2 Mixes

- 3.2.1 Hot-Mix Asphalt: Dense, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction, designed according to procedures in AI MS-2, and that have a history of satisfactory performance at the Site and for the intended use.
- 3.3 Examination
  - 3.3.1 Verify that subgrade is dry, at proper elevation, and in suitable condition to support paving and imposed loads.
  - 3.3.2 Proceed with paving only after unsatisfactory conditions have been corrected.
- 3.4 Patching
  - 3.4.1 Hot-Mix Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches (300 mm) into adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
  - 3.4.2 Patching: Partially fill excavated pavements with hot-mix asphalt base mix and, while still hot, compact. Cover asphalt base course with compacted, hot-mix surface layer finished flush with adjacent surfaces.
- 3.5 Surface Preparation
  - 3.5.1 General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
- 3.6 Hot-mix Asphalt Placing
  - 3.6.1 Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted:
    - a. Place hot-mix asphalt base course at thicknesses that match surrounding conditions.
    - b. Place hot-mix asphalt surface course in single lift.
    - c. Spread mix at minimum temperature of 250 deg F (121 deg C).
    - d. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
    - e. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt paving mat.

- 3.6.2 Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.
- 3.7 Compaction
- 3.7.1 General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers. Complete compaction before mix temperature cools to 185 deg F (85 deg C).
- 3.7.2 Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- 3.7.3 Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
- a. Average Density: 96 percent of reference laboratory density according to AASHTO T245, but not less than 94 percent nor greater than 100 percent.
  - b. Average Density: 92 percent of reference maximum theoretical density according to ASTM D2041, but not less than 90 percent nor greater than 96 percent.
- 3.7.4 Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- 3.7.5 Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- 3.7.6 Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- 3.7.7 Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- 3.8 Installation Tolerances
- 3.8.1 Thickness: Compact each course to produce the thickness necessary to match surrounding existing conditions within the following tolerances:
- 3.8.2 Base Course: thickness of existing base course, plus or minus ½ inch (13 mm).
- 3.8.3 Surface Course: thickness of existing surface course, plus ¼ inch (6 mm), no minus.

3.9 Field Quality Control

3.9.1 Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D3549.

END OF SECTION 02741

SECTION 02821  
ENGINEERING CONTROL OF ASBESTOS CONTAINING MATERIALS

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 Z9.2 (2006) Fundamentals Governing the Design and Operation of Local Exhaust Ventilation Systems

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z88.2 (1992) Respiratory Protection

ASTM INTERNATIONAL (ASTM)

ASTM C 732 (2006) Aging Effects of Artificial Weathering on Latex Sealants

ASTM D 1331 (1989; R 2001) Surface and Interfacial Tension of Solutions of Surface-Active Agents

ASTM D 2794 (1993; R 2004) Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)

ASTM D 522 (1993a; R 2008) Mandrel Bend Test of Attached Organic Coatings

ASTM E 119 (2010b) Standard Test Methods for Fire Tests of Building Construction and Materials

ASTM E 1368 (2005e1) Visual Inspection of Asbestos Abatement Projects

ASTM E 1494 (1992; R 2002) Encapsulants for Spray- or Trowel-Applied Friable Asbestos-Containing Building Materials

ASTM E 736 (2000; R 2006) Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members

ASTM E 84 (2010b) Standard Test Method for Surface Burning Characteristics of Building Materials

ASTM E 96/E 96M (2005) Standard Test Methods for Water Vapor Transmission of Materials

STATE OF NORTH CAROLINA ADMINISTRATIVE CODE

CHAPTER 10-A, SUBCHAPTER 41C - OCCUPATIONAL HEALTH

SECTION .0600 (ASBESTOS HAZARD MANAGEMENT PROGRAM)

CHAPTER 15A, SUBCHAPTER 13B - SOLID WASTE MANAGEMENT .0505  
(OPERATIONAL REQUIREMENTS FOR SANITARY LANDFILLS)

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024 (1985) Guidance for Controlling Asbestos-Containing Materials in Buildings (Purple Book)

40 CFR 61-SUBPART A General Provisions

40 CFR 61-SUBPART M National Emission Standard for Asbestos

40 CFR 763 Asbestos

U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1926.103 Respiratory Protection

29 CFR 1926.1101 Asbestos

29 CFR 1926.200 Accident Prevention Signs and Tags

29 CFR 1926.51 Sanitation

29 CFR 1926.59 Hazard Communication

UNDERWRITERS LABORATORIES (UL)

UL 586 (2009) Standard for High-Efficiency Particulate, Air Filter Units

1.2 Definitions

1.2.1 ACM: Asbestos Containing Materials.

1.2.2 Amended Water: Water containing a wetting agent or surfactant with a maximum surface tension of 2.9 Pa or 0.00042 psi when tested in accordance with ASTM D 1331.

1.2.3 Area Sampling: Sampling of asbestos fiber concentrations which approximates the concentrations of asbestos in the theoretical breathing zone but is not actually collected in the breathing zone of an employee.

1.2.4 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.

1.2.5 Asbestos Control Area: That area where asbestos removal operations are performed which is isolated by physical boundaries which assist in the prevention of the uncontrolled release of asbestos dust, fibers, or debris.

1.2.6 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.

1.2.7 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 or other Federal legislation having legal jurisdiction for the protection of workers health.

1.2.8 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.

1.2.9 Contractor: The Contractor is that individual, or entity under contract to perform the herein listed work.

- 1.2.10 **Competent Person:** A person meeting the requirements for competent person as specified in 29 CFR 1926.1101 including a person 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, and is specifically trained in a training course which meet the criteria of EPA's Model Accreditation Plan (40 CFR 763) for project designer or supervisor, or its equivalent. The competent person shall have a current State of North Carolina asbestos contractor or supervisor license.
- 1.2.11 **Encapsulation:** The abatement of an asbestos hazard through the appropriate use of chemical encapsulants.
- 1.2.12 **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 which must comply with performance requirements as specified herein.
- a. Removal Encapsulant (can be used as a wetting agent)
  - b. Bridging Encapsulant (used to provide a tough, durable surface coating to asbestos containing material)
  - c. Penetrating Encapsulant (used to penetrate the asbestos containing material encapsulating all asbestos fibers and preventing fiber release due to routine mechanical damage)
  - d. Lock-Down Encapsulant (used to seal off or "lock-down" minute asbestos fibers left on surfaces from which asbestos containing material has been removed).
- 1.2.13 **Friable Asbestos Material:** One percent asbestos containing material that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
- 1.2.14 **Glovebag Technique:** Those asbestos removal and control techniques put forth in 29 CFR 1926.1101 Appendix G.
- 1.2.15 **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.
- 1.2.16 **Negative Pressure Enclosure (NPE):** That engineering control technique described as a negative pressure enclosure in 29 CFR 1926.1101.
- 1.2.17 **Nonfriable 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.

- 1.2.18 Personal Sampling: Air sampling which is performed to determine asbestos fiber concentrations within the breathing zone of a specific employee, as performed in accordance with 29 CFR 1926.1101.
- 1.2.19 Private Qualified Person (PQP): That qualified person hired by the Contractor to perform the herein listed tasks. The PQP shall be a Registered Architect, Professional Engineer, Certified Industrial Hygienist (CIH), or Certified Hazardous Materials Manager (CHMM) who has successfully completed training and is therefore accredited under a legitimate State Model Accreditation Plan as described in 40 CFR 763 as a Building Inspector, Contractor/Supervisor Abatement Worker, or Asbestos Project Designer, as appropriate; has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent; and is appropriately licensed in the State of North Carolina. The PQP must be qualified to perform visual inspections as indicated in ASTM E 1368.
- 1.2.20 Qualified Person (QP): A person who has successfully completed training and is therefore accredited under a legitimate State Model Accreditation Plan as described in 40 CFR 763 as a Building Inspector, Contractor/Supervisor Abatement Worker, or Asbestos Project Designer, as appropriate; and has successfully completed the National Institute of Occupational Safety and Health (NIOSH) 582 course "Sampling and Evaluating Airborne Asbestos Dust" or equivalent. The QP shall be appropriately licensed in the State of North Carolina.
- 1.2.21 TEM: Refers to Transmission Electron Microscopy.
- 1.2.22 Time Weighted Average (TWA): The TWA is an 8-hour time weighted average airborne concentration of asbestos fibers.
- 1.2.23 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 must have a surface tension of at most 2.9 Pa/0.00042 psi when tested in accordance with ASTM D 1331.
- 1.3 Requirements
- 1.3.1 Description of Work: The work covered by this section includes the handling and control of asbestos containing materials and describes some of the resultant procedures and equipment required to protect workers, the environment and occupants of the building or area, or both, from contact with airborne asbestos fibers. The work also includes the disposal of any asbestos containing materials generated by the work. More specific operational procedures shall be outlined in the Asbestos Hazard Abatement Plan called for elsewhere in this specification. The asbestos work includes the removal of asbestos-containing floor tile and mastics located in Building 34. Under normal conditions these

non-friable and/or chemically bound materials containing asbestos would not be considered hazardous; however, this material may release airborne asbestos fibers during demolition and removal and therefore must be handled in accordance with the removal and disposal procedures as specified herein. The asbestos work also includes the removal of presumed asbestos-containing thermal systems insulation, gaskets, and (above and below-ground) cementitious piping associated with Building 18. Specifically, the asbestos-containing items and associated quantity estimates to be removed are as follows:

- a. 12'x12' Cream with gray mark floor tile and associated mastic; ~190 square feet
- b. Mastic under 12' x 12' red floor tile; ~190 square feet
- c. 9' x 9' red floor tile; ~480 square feet
- d. Presumed asbestos pipe jacket; ~40 square feet
- e. Presumed asbestos pipe flange gaskets; ~100 linear feet
- f. Presumed asbestos pipe insulation; ~80 linear feet
- g. Presumed asbestos inner plate gasketing or other insulation materials; Unknown quantity (assumed ~100 linear feet)
- h. Presumed asbestos underground or inaccessible piping (cementitious or insulated); Unknown quantity (assumed ~100 linear feet)

The quantities and location of ACM indicated in this Section and on any project drawings and the extent of work included in this Section are only best estimates which are inherently limited by the physical constraints of the asbestos survey. Accordingly, minor variations of plus or minus 15% of the estimated quantities of ACM within the limits of containment for each building are considered as having no impact on contract price and time of this contract. Locations of ACM on drawings and specifications but within the limits of the building containment are considered as having no impact on contract price and time of this contract. Where additional asbestos abatement work is required beyond the above variations, the contract price and time will be adjusted under provisions of applicable clause in the contract. Additional or reduced abatement work beyond the variations stated will be a basis for adjustment of the contract price.

With the exception of underground and exterior piping, negative pressure enclosure techniques will be utilized, as outlined in this specification. The buildings included in the demolition scope are currently vacant and will remain so during the asbestos abatement work. As such, the abatement areas and areas adjacent to abatement areas are not Public Areas as defined by 10A NCAC 41C .0601. All asbestos removal work shall be supervised by a competent person as specified herein.

- 1.3.2 Medical Requirements: Provide medical requirements including but not limited to medical surveillance and medical record keeping as listed in 29 CFR 1926.1101.

- a. **Medical Examinations:** Before exposure to airborne asbestos fibers, provide workers with a comprehensive medical examination as required by 29 CFR 1926.1101 and other pertinent State and local directives. This requirement must have been satisfied within the 12 months prior to the start of work on this contract. 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."
  - b. **Medical Records and Certifications:** Maintain complete and accurate records of employees' medical examinations, medical records, and exposure data in accordance with all OSHA and state regulations. Provide a written certification for each worker and supervisor, signed by a licensed physician indicating that the worker and supervisor has met or exceeded all of the medical prerequisites listed in 29 CFR 1926.1101 and 29 CFR 1926.103 as prescribed by law. Submit certificates prior to the start of work but after the main abatement submittal.
- 1.3.3 **Employee Training:** Submit certificates, prior to the start of work but after the main abatement submittal, signed by each employee indicating that the employee 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, not grouped by type of certification. Post appropriate evidence of compliance with the training requirements of 40 CFR 763. Train all personnel involved in the asbestos control work in accordance with United States Environmental Protection Agency (USEPA) Asbestos Hazard Emergency Response Act (AHERA) training criteria or State training criteria whichever is more stringent.

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 QP/PQP as required by 29 CFR 1926.1101. Fully cover engineering and other hazard control techniques and procedures. All asbestos workers shall have a current State of North Carolina asbestos worker's license.

- 1.3.4 **Permits, Licenses, and Notifications:** Obtain necessary permits and licenses in conjunction with asbestos removal, encapsulation, hauling, and disposition, and furnish

notification of such actions required by Federal, State, regional, and local authorities prior to the start of work. Notify the North Carolina Department of Health and Human Services and the Contracting Officer in writing 10 working days prior to commencement of work in accordance with 40 CFR 61-SUBPART M and 10A NCAC 41C .0601. Submit copies of all notifications to the Contracting Officer.

- 1.3.5 Environment, Safety and Health Compliance: In addition to detailed requirements of this specification, comply with those applicable laws, ordinances, criteria, rules, and regulations of Federal, State, 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 and 40 CFR 61-SUBPART M. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting the work. Where the requirements of this specification, applicable laws, rules, criteria, ordinances, regulations, and referenced documents vary, the most stringent requirement as defined by the Government shall apply.
- 1.3.6 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. Submit a written program manual or operating procedure including methods of compliance with regulatory statutes.
  - a. Respirator Program Records: Submit records of the respirator program as required by ANSI Z88.2, 29 CFR 1926.103, and 29 CFR 1926.1101.
- 1.3.7 Asbestos Hazard Control Supervisor: The Contractor shall be represented on site by a supervisor, trained using the model Contractor accreditation plan as indicated in the Federal statutes, and licensed in the State of North Carolina as an Asbestos Abatement Supervisor for all portions of the herein listed work.
- 1.3.8 Hazard Communication: Adhere to all parts of 29 CFR 1926.59 and provide the Contracting Officer with a copy of the Material Safety Data Sheets (MSDS) for all materials brought to the site.
- 1.3.9 Asbestos Hazard Abatement Plan: Submit a detailed plan of 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 removal of materials containing asbestos. The plan, not to be combined with other hazard abatement plans, shall be prepared, signed, and sealed by the PQP. Provide a Table of Contents for each abatement submittal, which shall follow the sequence of requirements in the contract. Such plan shall include but not be limited to the precise personal protective equipment to be used (including, but not limited to, respiratory protection, type of whole-body protection), decontamination methods, operations and quality control plan, the location of asbestos control areas including clean and dirty areas, buffer zones, showers, storage areas, change rooms, removal method, interface of trades involved in the construction, sequencing of asbestos related work, disposal plan, type of wetting agents and encapsulants 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 plan shall also include both fire and medical emergency response plans. The Asbestos Hazard Abatement Plan must be approved in writing prior to starting any asbestos work. The Contractor, Asbestos Hazard Control Supervisor, GC and PQP shall meet with the Contracting Officer prior to beginning work, to discuss in detail the Asbestos Hazard Abatement Plan, including work procedures and safety precautions. Once approved by the Contracting Officer, the plan will be enforced as if an addition to the specification. Any changes required in the specification as a result of the plan shall be identified specifically in the plan to allow for free discussion and approval by the Contracting Officer prior to starting work.

1.3.10 Testing Laboratory: Submit the name, address, and telephone number of each testing laboratory selected for the sampling, analysis, and reporting of airborne concentrations of asbestos fibers along with evidence that each laboratory selected holds the appropriate State license and/or permits and American Industrial Hygiene Association (AIHA) accreditation 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. The testing laboratory firm shall be independent of the asbestos contractor and shall have no employee or employer relationship which could constitute a conflict of interest.

1.3.11 Landfill Approval: Submit written evidence that the landfill is approved for asbestos disposal by the State of North Carolina in accordance with 15A NCAC 13B and local regulatory agencies and has acceptance for the waste from the local landfill operator. Within 3 working days after delivery, submit detailed delivery tickets, prepared, signed, and dated by an agent of the landfill, certifying the amount of asbestos materials delivered to the landfill. Submit a copy of the waste shipment records within 1 day of the shipment leaving the project site.

1.4 Submittals: Approval is required by the government or the Government Consultant (GC). The following shall be submitted in accordance with the submittal requirements and protocols described in this Specification:

1.4.1 SD-01 Preconstruction Submittals

a. Asbestos Hazard Abatement Plan

1.4.2 SD-03 Product Data

a. Local exhaust equipment;

b. Vacuums;

- c. Respirators;
- d. Pressure differential automatic recording instrument;
- e. Amended water;
- f. Glovebags;
- g. Material Safety Data Sheets (MSDS) for all proposed project chemicals;
- h. Encapsulants;
- i. Polyethylene sheeting.

#### 1.4.3 SD-06 Test Reports

- a. Daily air sampling results;
- b. Pressure differential recordings for negative pressure enclosure;
- c. Asbestos disposal quantity report;
- d. Clearance sampling.

#### 1.4.4 SD-07 Certificates

- a. Testing laboratory certifications;
- b. Private qualified person documentation;
- c. Contractor's license;
- d. Qualified Person documentation;
- e. Asbestos Worker's license;
- f. Asbestos Supervisor's license;
- g. Landfill approval;
- h. Medical certifications;
- i. Respiratory Protection Program;
- j. Water filtration equipment;
- k. Other equipment used to contain airborne asbestos fibers;
- l. NESHAPS Notifications.

#### 1.4.5 SD-11 Closeout Submittals

- a. Final clearance (Visual Inspection and Air Testing) certifications;
- b. Waste shipment records;

- c. Delivery tickets;
- d. Contractor daily field reports.

## 1.5 Quality Assurance

- 1.5.1 **Qualified/Private Qualified Persons Documentation:** Submit the name, address, and telephone number of the Qualified/Private Qualified Persons (QP/PQP) selected to prepare the Asbestos Hazard Abatement Plan, and perform monitoring and training. Submit documented evidence that the QP/PQP has successfully completed training in, and is accredited and certified as, a Building Inspector, Asbestos Contractor/Supervisor, and/or Asbestos Project Designer as required 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. All QPs/PQPs shall produce documentation that they are appropriately licensed in the State of North Carolina as an Asbestos Abatement Air Monitor, Supervising Air Monitor, Inspector, Management Planner, or designer, as appropriate. The PQP shall be a first tier subcontractor.
- 1.5.2 **Competent Person Documentation:** Submit training certification and a current State of North Carolina Asbestos Contractor's and Supervisor's License.
- 1.5.3 **Worker's License:** Submit documentation that all workers have a current North Carolina Asbestos Abatement Workers License.
- 1.5.4 **Contractor's License:** Contractor shall have current State of North Carolina Asbestos Abatement Contractor's license. Submit a copy of the contractor's license.
- 1.5.5 **Air Sampling Results:** Complete fiber counting and provide results to the GC for review within 16 hours of the "time off" of the sample pump. Notify the Contracting Officer immediately of any airborne levels of asbestos fibers in excess of the acceptable limits. Submit sampling results to the Contracting Officer and the affected Contractor employees where required by law within 3 working days, signed by the testing laboratory employee performing air sampling, the employee that analyzed the sample, and the GC. Notify the Contractor and the Contracting Officer 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 (regardless of background concentrations).
- 1.5.6 **Pressure Differential Recordings for Local Exhaust System:** 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 temporary enclosure associated with the asbestos control area is removed. Submit pressure differential recordings for each work day to the GC.

## PART 2 – PRODUCTS

## 2.1 Materials and Equipment

- 2.1.1 **Supply of Materials and Equipment:** Prior to the start of the work Contractor shall provide and maintain a sufficient quantity of materials and equipment to assure continuous and efficient work throughout the project. Do not start work unless the following items have been delivered on site and the CPIH has submitted verification to the Contracting Officer's Technical Representative (COTR) to this effect.
- 2.1.2 **Minimum Required Equipment and Materials :** Equipment and materials for the construction of the temporary negative pressure enclosures shall include flame-resistant polyethylene sheeting 6-mil in clear or opaque shades, staple guns, moisture resistant duct tape capable of continuously sealing polyethylene through project abatement duration, spray adhesive free of methylene chloride to seal seams on polyethylene material, lumber and plywood for enclosure/decontamination units, posters, printed signs and notices.

Equipment and materials for decontamination units shall include installation and plumbing hardware, shower stalls, hoses, drain pans, sump pumps and water storage drums or waste water filters.

Equipment and materials for enclosure exhaust systems shall include negative pressure units to provide 4 air changes per hour in work area (plus one reserve unit per active abatement area able to replace any malfunctioning HEPA unit without delay), HEPA and pre-filters, continuous differential pressure gauge data-logger and stripchart stock.

Equipment and materials for removal and containment of ACM shall include scrapers, brushes, brooms, shovels, ladders and scaffolds of suitable height and length, water hose to reach all areas, airless spray equipment, and other hand tools, electric cords, ground fault interrupters, and 6-mil polyethylene bags for asbestos waste, glove-bags.

- 2.1.3 **Packaging of Materials and Equipment:** Deliver materials to the job site in their original packaging or containers. Store all materials away from damage, weather, and contamination. Protect polyethylene from cold exposure. Do not store flammable material inside buildings. Inspect material regularly for damage, deterioration or contamination. Discard any damaged material. Discard ACM and Lead per these specifications. Do not block or hinder use of buildings by employees and visitors of the Government in partially occupied buildings by placing material in any unauthorized place.
- 2.1.4 **Encapsulants:** Encapsulants shall meet the latest requirements of the Environmental Protection Agency (EPA), shall not contain toxic or hazardous substances or harmful solvents, and shall comply with the following performance requirements.

a. General (for all encapsulants):

1. ASTM E84: Flame Spread of 25, smoke emission of 50.

2. Univ. of Pittsburgh Protocol: Combustion Toxicity, Zero - Mortality.
  3. ASTM C732, Accelerated Aging Test: Life Expectancy - 20 years.
  4. ASTM E96: Permeability - Minimum of 0.4 perms.
- b. Lock-Down Encapsulants:
1. ASTM E119: Fire Resistance - 3 hours (Tested with fireproofing over encapsulant applied directly to steel member).
  2. ASTM E736: Bond Strength - 100 lbs/ft (Test compatibility with cementitious and fibrous fireproofing).

### PART 3 – EXECUTION

- 3.1 Equipment: At all times, provide the Contracting Officer or the COTR, with at least two complete sets of personal protective equipment as required for entry to and inspection of the asbestos control area. Provide equivalent training to the Contracting Officer or a designated representative as provided to Contractor employees in the use of the required personal protective equipment. Provide manufacturer's certificate of compliance for all equipment used to contain airborne asbestos fibers.
- 3.1.1 Respirators: Select respirators from those approved by NIOSH, Department of Health and Human Services.
- a. Respirators for Handling Asbestos: Provide personnel engaged in pre-cleaning, cleanup, handling, removal and demolition of asbestos materials with respiratory protection as indicated in 29 CFR 1926.1101 and 29 CFR 1926.103.
- 3.1.2 Exterior Whole Body Protection
- a. Outer Protective Clothing: Provide personnel exposed to asbestos 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. Recyclable protective clothing shall not be used on this project.
  - b. Work Clothing: Work clothes may be worn under the outer protective clothing and work boots may be worn under foot coverings. Both will be left in the dirty room of the personal decontamination unit for the duration of the project and shall be disposed of as asbestos-contaminated waste.
- 3.1.3 Decontamination Unit: Provide a temporary, negative pressure unit with a separate dirty/equipment-drop room, clean room, and shower room in between that complies with 29 CFR 1926.51(f)(4)(ii) through (V). Street clothing/shoes are to remain in the clean

room. When exiting the abatement work area, 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. All employees are required to 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. Decontamination units shall be physically attached to the asbestos control area/NPE. Build both a personnel decontamination unit and an equipment decontamination unit onto and integral with each asbestos control area.

- 3.1.4 Warning Signs and Labels: Provide warning signs 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.
- a. Warning Sign: Provide vertical format conforming to 29 CFR 1926.200, and 29 CFR 1926.1101 minimum 20 by 14 inches.
  - b. 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

- 3.1.5 Local Exhaust System: Provide a local exhaust system in the asbestos control area in accordance with AIHA 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 an automated pressure differential 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 AIHA Z9.2 and UL 586. The local exhaust system shall terminate out of doors and remote from any public access or active ventilation system intakes.
- 3.1.6 Tools: Vacuums shall be leak proof to the filter and equipped with HEPA filters. Filters on vacuums shall conform to AIHA 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.

- 3.1.7 Rental Equipment: If rental equipment is to be used, furnish written notification to the rental agency concerning the intended use of the equipment and the possibility of asbestos contamination of the equipment.
- 3.1.8 Glovebags: Submit written manufacturers proof that glovebags will not break down under expected temperatures and conditions.
- 3.1.9 Other Personal Protective Equipment: Protective gear including protective foot coverings, safety glasses/goggles, fall protection, head protection and hand protection shall be used on this project, as required. Protective gear shall be thoroughly decontaminated by HEPA vacuuming and wet wiping prior to removal from the work area at project completion or discarded as asbestos-contaminated waste.
- 3.2 Work Procedure: Perform asbestos related work in accordance with 29 CFR 1926.1101, 40 CFR 61- SUBPART M, and as specified herein. Use wet and negative pressure enclosure techniques. Personnel shall wear and utilize protective clothing 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 of asbestos-containing material shall not be allowed in or adjacent to Regulated Areas unless all the personnel protection and training provisions of this specification are complied with by the trade personnel.

Shut down the building heating, ventilating, and air conditioning system, and cap the openings to the system prior to the commencement of asbestos work. Disconnect electrical service to the areas where wet removal is performed and provide temporary electrical service with verifiable ground fault circuit interrupter (GFCI) protection prior to the use of any water/amended water/encapsulants. If an asbestos fiber release or spill occurs outside of the asbestos control area, stop work immediately, correct the condition to the satisfaction of the COTR, including clearance sampling, prior to resumption of work.

- 3.2.1 Protection of Existing Work to Remain: Perform work without contamination of adjacent areas. Where such contamination has occurred, as verified by the COTR using visual inspection or sample analysis, it shall be restored to its original condition and decontaminated by the Contractor at no expense to the Government as deemed appropriate by the COTR. This includes inadvertent spill of dirt, dust, or debris in which it is reasonable to conclude that asbestos may exist. When these spills occur, stop work immediately and clean up and released waste material. When satisfactory visual inspection and air sampling results are obtained from the GC work may proceed at the discretion of the COTR.
- 3.2.2 Furnishings: Removable furniture and equipment will be removed from the area of work by the Government before asbestos work begins. Any furniture or equipment that cannot be removed and needs to remain in abatement area will be covered and sealed 6-mil plastic sheeting. Carpets, draperies, and other items that remain in the abatement area

with porous, non-solid surfaces that cannot be or are not suitably cleaned shall be properly disposed of as contaminated waste.

3.2.3 Precleaning: Wet wipe and HEPA vacuum all surfaces potentially contaminated with asbestos prior to establishment of an enclosure.

3.2.4 Asbestos Control Area Requirements

a. Negative Pressure Enclosure: Block and seal openings in areas where the release of airborne asbestos fibers can be expected (including HVAC systems) with a double layer of 6-mil plastic sheeting. 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 preparation shall include protective covering of all porous surfaces and on all surfaces under removal activities (w/ the exception of floor tile and associated mastics) with a continuous membrane of two plastic sheet sheeting sealed with tape to contain contaminated abatement water. Seal all joints with tape. Provide local exhaust system in the asbestos control area. Openings will be allowed in enclosures of asbestos control areas for personnel 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.

b. Glovebag: The construction of a negative pressure enclosure is infeasible for the removal of asbestos pipe insulation and cementitious asbestos pipe located outside of buildings and/or buried underground. Use alternate glovebag 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 PQP shall collect personal samples for workers engaged in asbestos handling (removal, disposal, transport and other associated work) throughout the duration of the work in these areas. If the quantity of airborne asbestos fibers monitored at the breathing zone of the workers at any time exceeds background or 0.01 fibers per cubic centimeter whichever is greater, stop work, evacuate personnel in adjacent areas or provide personnel with approved protective equipment at the discretion of the COTR.

3.2.5 Removal Procedures: Wet asbestos material with amended water or mastic removing solvents during removal, cutting, or other handling so as to reduce the emission of airborne fibers. Remove material and immediately place in 6 mil plastic 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. Piping and insulation may be wrapped in plastic and removed as a single component after being wetted. All asbestos containing material shall be containerized while wet. At no time shall asbestos material be allowed to accumulate or become dry. Handle asbestos containing material as indicated in 40 CFR 61-SUBPART M.

- a. Sealing Contaminated Items Designated for Disposal: Remove contaminated architectural, mechanical, and electrical appurtenances such as venetian blinds, full-height partitions, carpeting, duct work, pipes and fittings, radiators, light fixtures, conduit, panels, and other contaminated items designated for removal by completely coating the items with an asbestos lock-down encapsulant at the demolition site before removing the items from the asbestos control area. These items need not be vacuumed or otherwise decontaminated unless they will be disposed of as non-asbestos waste. The asbestos lock-down encapsulant shall be tinted a contrasting color and shall be spray-applied by airless method. Thoroughness of sealing operation shall be visually gauged by the extent of colored coating on exposed surfaces. Lock-down encapsulants shall comply with the performance requirements specified herein.
  - b. Exposed Pipe Insulation Edges: Contain edges of asbestos insulation to remain (temporarily) that are exposed by a removal operation, as in the case of asbestos-insulated or asbestos-containing cementitious pipes that extend outside of the building and the negative pressure enclosure. Wet and seal the rough ends with duct tape and plastic sheeting.
- 3.2.6 Encapsulation Procedures: Lock-down encapsulants may be used ONLY after each area has successfully passed a final visual inspection. Refer to section 3.2.8 for lock-down procedures.
- 3.2.7 Air Sampling: Sampling of airborne concentrations of asbestos fibers shall be performed in accordance with 29 CFR 1926.1101 and as specified herein. Sampling performed in accordance with 29 CFR 1926.1101 shall be performed by the PQP or QP. Sampling performed for environmental and quality control purposes shall be performed by the GC. Unless otherwise specified, use NIOSH Method 7400 for sampling and analysis. Monitoring may be duplicated by the Government at the discretion of the COTR.
- a. Sampling Prior to Asbestos Work: Provide area air sampling and establish baseline airborne fiber concentrations one day prior to the inception of prepping operations for each removal site. Establish the background by performing area sampling in similar but uncontaminated sites in the building.
  - b. Sampling During Asbestos Work: The PQP shall provide personal sampling as indicated in 29 CFR 1926.1101 and other governing environmental regulations. In addition, the GC will provide area sampling at least once every work shift in the following areas: 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 0.01 fibers per cubic centimeter or background, whichever is greater, stop all work, correct the condition(s) causing the elevated concentrations, and notify the COTR immediately. For regulated areas where alternate methods are used (i.e. outdoor glovebag areas or pipe excavation areas) area air sampling will be conducted upwind and downwind, at the perimeter of the regulated area, on a daily basis.

- c. **Sampling After Final Clean-Up (Clearance Sampling):** Area final clearance sampling of asbestos fibers will be conducted using aggressive air sampling techniques as defined in the EPA 560/5-85-024 to establish an airborne asbestos concentration of less than 0.01 fibers per cubic centimeter (or background concentrations) after final clean-up but before removal of the enclosure or the asbestos work area controls. After final cleanup and the asbestos control area is dry but prior to clearance sampling, the GC shall perform a visual inspection in accordance with ASTM E 1368 to ensure that the asbestos control and work areas are free of any accumulations of dirt, dust, or debris that may contain asbestos. After successful visual inspection, the final clearance air sampling will be conducted consisting of one PCM test per 1000 square feet of abatement area. Should any of the final samples indicate a higher value than 0.01 fibers per cubic centimeter and background, the Contractor shall take appropriate actions to re-clean the area and shall repeat the sampling and analysis at the Contractor's expense. The Contractor shall submit Clearance Sampling test results to the COTR.
- 3.2.8 **Lock-Down:** Prior to removal of plastic barriers and after pre-clearance clean up of gross contamination, the GC shall conduct a visual inspection of all areas affected by the removal in accordance with ASTM E 1368. A post removal (lock-down) encapsulant may be spray applied to ceiling, walls, floors and other areas exposed in the removal area prior to final clearance sampling.
  - 3.2.9 **Site Inspection:** While performing asbestos engineering control work, the Contractor shall be subject to on-site inspection by the COTR, who may be assisted by or represented by safety or industrial hygiene personnel and/or the GC. If the work is found to be in violation of this specification, the COTR 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.
- 3.3 **Clean-Up and Disposal**
    - 3.3.1 **Housekeeping:** Essential parts of asbestos dust control are housekeeping and clean-up procedures. Maintain surfaces of the asbestos control area free of accumulations of ACM and asbestos debris. 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. When asbestos removal is complete, all asbestos waste is removed from the work-site, and final clean-up is completed, the COTR will attest that the area is safe before the signs can be removed. After final clean-up and acceptable airborne concentrations are attained but before the HEPA unit is turned off and the enclosure removed, remove all pre-filters on the building HVAC system and provide new pre-filters. Dispose of filters as asbestos contaminated materials. Reestablish HVAC mechanical, and electrical systems in proper working order as called for in other portions of this Specification. The GC will 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 at his expense. If re-cleaning is required, final air

clearance sampling will be conducted again to establish acceptable airborne fiber concentrations after re-cleaning. The COTR must agree that the area is safe in writing before unrestricted entry will be permitted.

3.3.2 Title to Materials: All waste materials, except as specified otherwise, shall become the property of the Contractor and shall be disposed of as specified in accordance with applicable local, State, and Federal regulations and herein.

3.3.3 Disposal of Asbestos

- a. 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. 6 mil thick double plastic bags, cartons, drums or cans). Wastes within the containers must 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 thick 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. 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 Environmental Protection Agency (EPA) or State-approved asbestos landfill. For temporary storage, store sealed impermeable bags in asbestos waste drums or skids. An area for interim storage of asbestos waste-containing drums or skids may be assigned by the COTR. Procedure for hauling and disposal shall comply with 40 CFR 61-SUBPART M, State, and local standards. Workers handling waste containers shall wear appropriate respirators and personal protective equipment.
- b. Asbestos Disposal Quantity Report: The QP or PQP will record and report, to the Contracting Officer, the amount of asbestos containing material removed and released for disposal. Deliver the report for the previous day at the beginning of each day shift with amounts of material removed during the previous day reported in linear feet or square feet as described initially in this specification and in cubic feet for the amount of asbestos containing material released for disposal. Allow the GC to inspect, record and report the amount of asbestos-containing material removed and released for disposal on a daily basis.

END OF SECTION 02821

SECTION 02831  
LEAD IN CONSTRUCTION

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 Z88.2 (1992) Respiratory Protection

STATE OF NORTH CAROLINA ADMINISTRATIVE CODE  
15A NCAC 13B .0100 SOLID WASTE MANAGEMENT  
10A NCAC 41C .0800 LEAD-BASED PAINT HAZARD MANAGEMENT  
PROGRAM

U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)  
29 CFR 1926.103 Respiratory Protection  
29 CFR 1926.21 Safety Training and Education  
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 Communication  
29 CFR 1926.62 Lead

1.2 Definitions

- 1.2.1 Action Level: Employee exposure, without regard to use of respirators, to an airborne concentration of lead of 30 micrograms per cubic meter of air averaged over an 8 hour period.
- 1.2.2 Area Sampling: Sampling of lead concentrations within the lead control area and inside the physical boundaries which is representative of the airborne lead concentrations but is not collected in the breathing zone of personnel (approximately 5 to 6 feet above the floor).
- 1.2.3 Competent Person (CP): 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 and has the authority to take prompt corrective actions to control the lead hazard. The CP shall be a Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene, a Certified Safety Professional (CSP) certified by the Board of Certified Safety Professionals, or a Certified Hazardous Materials Manager (CHMM) certified and accredited by the American National Standards Institute (ANSI) and the Council of Engineering and Scientific Specialty Boards.
- 1.2.7 Lead: Metallic lead, inorganic lead compounds, and organic lead soaps.

- 1.2.8 Lead Control Area: A system of control methods to prevent the spread of lead dust, paint chips or debris to adjacent areas that may include floor or ground cover protection, physical boundaries, and warning signs to prevent unauthorized entry of personnel. HEPA filtered local exhaust equipment may be used as engineering controls to further reduce personnel exposures or building/outdoor environmental contamination.
- 1.2.9 Lead Permissible Exposure Limit (PEL): Fifty micrograms per cubic meter of air as an 8 hour time weighted average as determined by 29 CFR 1926.62. If an employee is exposed for more than eight hours in a work day, the PEL shall be determined by the following formula:
- $$\text{PEL (micrograms/cubic meter of air)} = 400/\text{No. hrs worked per day}$$
- 1.2.10 Material Containing Lead/Paint with Lead (MCL/PWL): Any material, including paint, which contains lead as determined by the testing laboratory using a valid test method. The requirements of this section does not apply if no detectable levels of lead are found using a quantitative method for analyzing paint or MCL using laboratory instruments with specified limits of detection (usually 0.01 percent). An X-Ray Fluorescence (XRF) instrument is not considered a valid test method.
- 1.2.11 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 representative of the employees' work tasks. Breathing zone 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.
- 1.2.12 Physical Boundary: Area physically roped or partitioned off around lead control area to limit unauthorized entry of personnel.

### 1.3 Description

- 1.3.1 Description of Work: Construction activities impacting PWL or materials containing lead which are covered by this specification include the demolition and/or removal of building components and materials containing lead-based coatings in various conditions, and located throughout the facility scheduled for demolition.

The intent of this Section is to ensure that engineering controls and work practices are properly used during demolition activities to minimize and control the generation of lead dust, and to monitor for elevated airborne lead levels.

- 1.3.2 Coordination with Other Work: The contractor shall coordinate with work being performed in adjacent areas. Coordination procedures shall be explained in the Workplan and shall describe how the Contractor will prevent lead exposure to other contractors and/or Government personnel performing work unrelated to lead activities.

- 1.4 Submittals: The following shall be submitted in accordance with Section 01300 SUBMITTALS:
- 1.4.1 SD-01 Preconstruction Submittals
- a. Lead Compliance Plan including CP approval (signature, date, and certification number);
  - b. Competent Person qualifications;
  - c. Training Certification of workers and supervisors;
  - d. Approved waste profiles for the demolition waste streams.
- 1.4.2 SD-06 Test Reports
- a. Personal and Area air sampling results;
- 1.4.3 SD-07 Certificates
- a. Testing laboratory qualifications/certifications;
- 1.4.4 SD-11 Closeout Submittals
- a. Disposal Documentation;
- 1.5 Quality Assurance
- 1.5.1 Qualifications
- a. Competent Person (CP): Submit name, address, and telephone number of the CP selected to perform responsibilities specified in paragraph entitled "Competent Person (CP) Responsibilities." Provide documented construction project-related experience with implementation of OSHA's Lead in Construction standard (29 CFR 1926.62) which shows ability to assess occupational and environmental exposure to lead, experience with the use of respirators, personal protective equipment and other exposure reduction methods to protect employee health. Submit proper documentation that the CP is trained in the recognition and control of lead hazards holds certifications as a Certified Industrial Hygienist (CIH) certified by the American Board of Industrial Hygiene, a Certified Safety Professional (CSP) certified by the Board of Certified Safety Professionals, or a Certified Hazardous Materials Manager (CHMM) certified and accredited by the American National Standards Institute (ANSI) and the Council of Engineering and Scientific Specialty Boards.

- b. Training Certification: Submit a certificate for each worker and supervisor, signed and dated by the accredited training provider, stating that the employee has received the required lead training specified in 29 CFR 1926.62(1).
- c. Testing Laboratory: Submit the name, address, and telephone number of the testing laboratory selected to perform the air analysis, testing, and reporting of airborne concentrations of lead. Use a laboratory participating in the EPA National Lead Laboratory Accreditation Program (NLLAP) by being accredited by either the American Association for Laboratory Accreditation (A2LA) 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. Laboratories selected to perform blood lead analysis shall be OSHA approved.

### 1.5.2 Requirements

- a. Competent Person (CP) Responsibilities
  1. Verify training meets all federal, State, and local requirements.
  2. Review and approve Lead Compliance Plan for conformance to the applicable referenced standards.
  3. Continuously inspect PWL or MCL work for conformance with the approved plan.
  4. Perform (or oversee performance of) air sampling. Recommend upgrades or downgrades (whichever is appropriate based on exposure) on the use of PPE (respirators included) and engineering controls.
  5. Ensure work is performed in strict accordance with specifications at all times.
  6. Control work to prevent hazardous exposure to human beings and to the environment at all times.
  7. Certify the conditions of the work as called for elsewhere in this specification.
- b. Lead Compliance Plan: Submit a detailed job-specific plan of the work procedures to be used in the disturbance of PWL or MCL. The plan shall include a sketch showing the location, size, and details of lead control areas, physical boundaries, and location and details of decontamination facilities. Include a description of equipment and materials, work practices, controls and job responsibilities for each activity involving lead work. Include in the plan, eating, drinking, smoking, hygiene facilities and sanitary procedures, interface of trades, sequencing of lead related work, collected waste water and dust containing lead and debris, air sampling, respirators, personal protective equipment, and a detailed description of the method of containment of the operation to ensure that lead is not released outside of the lead control area. Include

site preparation, and cleanup procedures. Include occupational and environmental sampling, training and strategy, sampling and analysis strategy and methodology, frequency of sampling, duration of sampling, and qualifications of sampling personnel in the air sampling portion of the plan. Include a description of arrangements made among contractors on multi-contractor worksites to inform affected employees and to clarify responsibilities to control exposures.

- c. Occupational and Environmental Assessment Data Report: Submit occupational and environmental sampling results to the Contracting Officer signed by the testing laboratory employee performing the analysis, the employee that performed the sampling, and the CP. In order to reduce the full implementation of 29 CFR 1926.62, the Contractor shall provide the above documentation supporting the determination to reduce full implementation of 29 CFR 1926.62, and the rationale for the methodologies included in the Lead Compliance Plan.

## PART 2 – PRODUCTS

Not used.

## PART 3 – EXECUTION

- 3.1 Notification: Notify the COTR 20 days prior to the start of any lead work.
- 3.2 Lead Control Area
  - 3.2.1 Physical Boundary: Provide physical boundaries around the lead control area by roping off or physically demarcating the area designated in the Lead Compliance Plan.
  - 3.2.2 Warning Signs: Provide warning signs at approaches to lead control areas. Locate signs at such a distance that personnel may read the sign and take the necessary precautions before entering the area. Signs shall comply with the requirements of 29 CFR 1926.62.
- 3.3 Personnel Protection: Personnel shall wear and use protective clothing and equipment as specified herein. Eating, smoking, or drinking or application of cosmetics is not permitted in the lead control area. No one will be permitted in the lead control area unless they have been appropriately trained and provided with protective equipment.
- 3.4 Real-Time Monitoring: Real-time monitoring shall be conducted to identify ambient particulate concentrations inside and outside of the Lead Control Area. Threshold concentrations will be set by the CP and indicated in the Lead Compliance Plan. The Lead Compliance Plan will also state appropriate remedies/actions in case threshold concentrations are exceeded.
- 3.5 Dust Suppression Methods: Dust suppression methods shall be employed during the active demolition phase of the project to minimize airborne lead dust concentrations in the Lead Control Area and to prevent dust from migrating beyond the Lead Control Area.

Such methods may include the spraying of water or amended water prior to the commencement of demolition (pre-wetting) and during the demolition/deconstruction of structures, as outlined in the Lead Compliance Plan.

### 3.6 Disposal

- 3.6.1 General: All material, whether hazardous or non-hazardous shall be disposed in accordance with all laws and provisions and all federal, State or local regulations. Contractor shall ensure all waste is properly characterized and profiled. The result of each waste characterization (including laboratory analyticals, generator knowledge, engineering estimates, or other means of waste profiling and hazardous waste determination) will dictate disposal requirements. Contractor is responsible for any segregation of wastes necessary for regulatory compliance.
- 3.6.2 Hazardous Waste Determination: TCLP testing is generally not required of generators of demolition debris that may contain materials coated with lead-based paint for a non-hazardous waste determination, provided that: 1.) the generator of such debris takes reasonable precautions, prior to demolition, to minimize contamination of the debris from other sources of contaminants. Such precautions will generally involve inspecting the structure and removing potentially hazardous materials such as mercury thermostats, lead piping, and containerized paints, solvents or other chemicals. If such materials are found and are determined to be hazardous wastes, they must be managed in accordance with applicable hazardous waste regulations, and 2.) The demolition debris is disposed of at a solid waste landfill that is permitted by the State of North Carolina and which meets the current design standards for municipal solid waste disposal facilities of 40 CFR Part 258.
- 3.6.3 Disposal Documentation: Submit written evidence to demonstrate the waste disposal facility (TSD) has approved the waste as described on the profile. Submit one copy of the completed waste manifest, signed and dated by the initial transporter. Contractor shall provide a certificate that the waste was accepted by the disposal facility. Provide turn-in documents or weight tickets for non-hazardous waste disposal.

END OF SECTION 02831

SECTION 31230  
EXCAVATION AND FILL

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 in the text by the basic designation only.

AMERICAN WATER WORKS ASSOCIATION (AWWA)

AWWA C600 (2010) Installation of Ductile-Iron Water Mains and Their Appurtenances

AMERICAN WELDING SOCIETY (AWS)

AWS D1.1/D1.1M (2010) Structural Welding Code - Steel

AMERICAN WOOD PROTECTION ASSOCIATION (AWPA)

AWPA C2 (2003) Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes  
AWPA P5 (2009) Standard for Waterborne Preservatives

ASTM INTERNATIONAL (ASTM)

ASTM A 139/A 139M (2004; R 2010) Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (NPS 4 and over)  
ASTM A 252 (2010) Standard Specification for Welded and Seamless Steel Pipe Piles  
ASTM C 136 (2006) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates  
ASTM C 33/C 33M (2008) Standard Specification for Concrete Aggregates  
ASTM D 1140 (2000; R 2006) Amount of Material in Soils Finer than the No. 200 (75-micrometer) Sieve  
ASTM D 1556 (2007) Density and Unit Weight of Soil in Place by the Sand-Cone Method  
ASTM D 1557 (2009) Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft<sup>3</sup>) (2700 kN-m/m<sup>3</sup>)  
ASTM D 1883 (2007e2) CBR (California Bearing Ratio) of Laboratory-Compacted Soils  
ASTM D 2216 (2010) Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass  
ASTM D 2321 (2009) Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications  
ASTM D 2434 (1968; R 2006) Permeability of Granular Soils (Constant Head)  
ASTM D 2487 (2010) Soils for Engineering Purposes (Unified Soil Classification System)

ASTM D 3786/D 3786M	(2009) Hydraulic Bursting Strength of Textile Fabrics-Diaphragm Bursting Strength Tester Method
ASTM D 422	(1963; R 2007) Particle-Size Analysis of Soils
ASTM D 4318	(2010) Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D 4355	(2007) Deterioration of Geotextiles from Exposure to Light, Moisture and Heat in a Xenon-Arc Type Apparatus
ASTM D 4491	(1999a; R 2009) Water Permeability of Geotextiles by Permittivity
ASTM D 4533	(2004; R 2009) Trapezoid Tearing Strength of Geotextiles
ASTM D 4632	(2008) Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	(2004) Determining Apparent Opening Size of a Geotextile
ASTM D 4759	(2002; R 2007) Determining the Specification Conformance of Geosynthetics
ASTM D 4833	(2007) Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 6938	(2010) Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D 698	(2007e1) Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu. ft. (600 kN-m/cu. m.))

U.S. ARMY CORPS OF ENGINEERS (USACE)

EM 385-1-1	(2008; Change 1-2010; Change 3-2010; Errata 1-2010) Safety and Health Requirements Manual
------------	---

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 600/4-79/020	(1983) Methods for Chemical Analysis of Water and Wastes

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-203	(Rev C; Notice 3) Paper, Kraft, Untreated
-------------	---

1.2 Definitions

- 1.2.1 Degree of Compaction: Degree of compaction is expressed as a percentage of the maximum density obtained by the test procedure presented in ASTM D 698, for general soil types, abbreviated as percent laboratory maximum density.

- 1.2.2 Hard Materials: Weathered rock, dense consolidated deposits, or conglomerate materials 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.
- 1.2.3 Rock: Solid homogeneous interlocking crystalline material with firmly cemented, laminated, or foliated masses or conglomerate deposits, neither of which can 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 1/2cubic yard 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.
- 1.3 Submittals: The following shall be submitted in accordance with Section 01300 SUBMITTALS:
  - 1.3.1 Submit 15 days prior to starting work:
    - a. SD-06 Test Reports
    - b. Borrow Site Testing;
    - c. Fill and backfill test
  - 1.3.2 Copies of all laboratory and field test reports within 24 hours of the completion of the test.
- 1.4 Delivery, Storage, and Handling: Perform in a manner to prevent contamination or segregation of materials.
- 1.5 Criteria For Bidding:
  - 1.5.1 Surface elevations are as indicated.
  - 1.5.2 Pipes or other artificial obstructions, except those indicated, will not be encountered.
  - 1.5.3 Ground water elevation is 3 to 4.5 feet below existing surface elevation.
  - 1.5.4 Native hard materials will not be encountered at 1 foot below existing surface elevations.
  - 1.5.5 Satisfactory backfill in the quantities required is not available at the project site.
  - 1.5.6 Blasting will not be permitted. Remove material in an approved manner.
- 1.6 Requirements for Off Site/Borrow Soil: Soils brought in from off site for use as backfill shall be tested for TPH, BTEX and full TCLP including ignitability, corrosivity and reactivity. Backfill shall contain less than 100 parts per million (ppm) of total petroleum

hydrocarbons (TPH) and less than 10 ppm of the sum of Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) and shall not fail the TCLP test. TPH concentrations shall be determined by using EPA 600/4-79/020 Method 418.1. BTEX concentrations shall be determined by using EPA 530/F-93/004 Method 5030/8020. TCLP shall be performed in accordance with EPA 530/F-93/004 Method 1311. Provide Borrow Site Testing for TPH, BTEX and TCLP from a composite sample of material from the borrow site, with at least one test from each borrow site. Material shall not be brought on site until tests have been approved by the Contracting Officer.

## 1.7 Quality Assurance

- 1.7.1 Utilities: Movement of construction machinery and equipment over pipes and utilities during construction shall be at the Contractor's risk. Report damage to utility lines or subsurface construction immediately to the Contracting Officer.

## PART 2 – PRODUCTS

### 2.1 Soil Materials

- 2.1.1 Satisfactory Materials: Any locally available materials classified by ASTM D 2487 as SW, SP, SM, free of debris, roots, wood, scrap material, vegetation, refuse, soft unsound particles, and deleterious, or objectionable materials. Unless specified otherwise, the maximum particle diameter shall be one-half the lift thickness at the intended location.

- 2.1.2 Unsatisfactory Materials: Materials which do not comply with the requirements for satisfactory materials. Unsatisfactory materials also include man-made fills, trash, refuse, or backfills from previous construction. Unsatisfactory material also includes material classified as satisfactory which contains root and other organic matter, frozen material, and stones larger than 1/2 inches. The Contracting Officer shall be notified of any contaminated materials.

- 2.2 Borrow: Obtain borrow materials required in excess of those furnished from excavations from sources outside of Government property.

## PART 3 – EXECUTION

### 3.1 Protection

- 3.1.1 Drainage and Dewatering: Provide for the collection and disposal of surface and subsurface water encountered during construction.
- a. Drainage: So that construction operations progress successfully, completely drain construction site during periods of construction to keep soil materials sufficiently dry. The Contractor shall establish/construct storm drainage features (ponds/basins) at the earliest stages of site development, if necessary, and throughout construction grade the construction area to provide positive surface water runoff away from the

- construction activity and/or provide temporary ditches, swales, and other drainage features and equipment as required to maintain dry soils. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove unsuitable material and provide new soil material as specified herein. It is the responsibility of the Contractor to assess the soil and ground water conditions presented by the plans and specifications and to employ necessary measures to permit construction to proceed. Excavated slopes and backfill surfaces shall be protected to prevent erosion and sloughing. Excavation shall be performed so that the site, the area immediately surrounding the site, and the area affecting operations at the site shall be continually and effectively drained.
- b. Dewatering: Groundwater flowing toward or into excavations shall be controlled to prevent sloughing of excavation slopes and walls, boils, uplift and heave in the excavation and to eliminate interference with orderly progress of construction. Water removed from excavations shall be discharged onsite using a dry sump or silt bag. Water removed from excavations shall not be discharged directly to the Site surface.
- 3.1.2 Underground Utilities: Location of the existing utilities indicated is approximate. The Contractor shall physically verify the location and elevation of the existing utilities indicated prior to starting construction.
- 3.1.3 Machinery and Equipment: Movement of construction machinery and equipment over pipes during construction shall be at the Contractor's risk. Repair, or remove and provide new pipe for existing operational pipe that has been displaced or damaged.
- 3.2 Surface Preparation
- 3.2.1 Clearing and Grubbing: Unless indicated otherwise, remove trees, stumps, logs, shrubs, brush and vegetation and other items that would interfere with construction operations within the clearing limits. Remove stumps entirely. Grub out matted roots and roots over 2 inches in diameter to at least 18 inches below existing surface.
- 3.2.2 Stripping: Strip suitable soil from the site where excavation or grading is indicated and stockpile separately from other excavated material. Material unsuitable for use as topsoil shall be stockpiled and used for backfilling. Locate topsoil so that the material can be used readily for the finished grading. Where sufficient existing topsoil conforming to the material requirements is not available on site, provide borrow materials suitable for use as topsoil. Protect topsoil and keep in segregated piles until needed.
- 3.2.3 Unsuitable Material: Remove vegetation, debris, decayed vegetable matter, sod, mulch, and rubbish underneath paved areas or concrete slabs.
- 3.3 Excavation: Excavate as required to remove utility surface expressions and structures as indicated in these Specifications and on the Construction Drawings. Reuse excavated materials that meet the specified requirements for the material type required at the intended location. Keep excavations free from water. Unsatisfactory material

encountered below the grades shown shall remain. Unless specified otherwise, refill excavations with satisfactory material and compact to 85 percent of ASTM D 698 maximum density. Satisfactory material removed below the depths indicated, without specific direction of the COTR, shall be replaced with satisfactory materials to the indicated excavation grade.

- 3.4 Filling and Backfilling: Fill and backfill to contours, elevations, and dimensions indicated. Where contours elevations, and dimensions are not indicated, fill and backfill to promote positive drainage away from the filled or backfilled area.
  - 3.4.1 Satisfactory Material Placement: Provide for general site. When placing satisfactory materials for backfill purposes, place in 12 inch lifts and compact to 85 percent of ASTM D 698 maximum density.
- 3.5 Borrow: Where satisfactory materials are not available in sufficient quantity from required excavations, approved borrow materials shall be obtained as specified herein.
- 3.6 Compaction
  - 3.6.1 General Site: Place in 12 inch lifts and compact to 85 percent of ASTM D 698.
  - 3.6.2 Paved Areas: For pavement repair areas, compact subgrade as specified in Section 02741 FLEXIBLE PAVEMENT REPAIR.
- 3.7 Finish Operations
  - 3.7.1 Grading: Finish grades as indicated within one-tenth of one foot. For existing grades that will remain but which were disturbed by Contractor's operations, grade as directed by the Contracting Officer.
  - 3.7.2 Seeding: Provide as specified in the Soil Erosion and Sedimentation Control Plan.
  - 3.7.3 Protection of Surfaces: Protect newly backfilled, graded, and topsoiled areas from traffic, erosion, and settlements that may occur. Repair or reestablish damaged grades, elevations, or slopes.
- 3.8 Disposition of Surplus Material: Remove from Government property surplus or other soil material not required or suitable for filling or backfilling, and brush, refuse, stumps, roots, and timber.
- 3.9 Field Quality Control: Not applicable.

END OF SECTION 31230