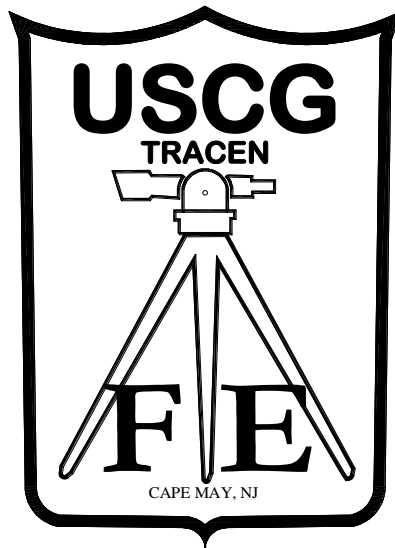


**TRAINING CENTER  
CAPE MAY, NJ**

**FACILITIES ENGINEERING  
DIVISION**



**CMS-1599**

**Project No.: 14226167**

**JUNE 2020**

**SPECIFICATION FOR REPAIR FIRE HYDRANTS  
AT VARIOUS LOCATIONS  
RPFN: U03, POTABLE WATER SYSTEM  
TRACEN CAPE MAY  
CAPE MAY, NEW JERSEY**

**AUTHOR: LT Justin Davis**

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## DIVISION 01 – GENERAL REQUIREMENTS

### SECTION 01 11 00 SCOPE OF WORK

1. WORK INCLUDED: Work of the Project includes all materials, labor, equipment, services, and all operations necessary for the repair of fire hydrants, RPFN U03, at United States Coast Guard Training Center (TRACEN) Cape May, New Jersey:
  - 1.1 Major work items include but are not limited to:
    - A. Provide and install 9 new dry barrel fire hydrants with stems to replace existing out of service hydrants;
    - B. Demolish and cap one additional out of service hydrant;
    - C. Mobilization, demobilization and clean up;
    - D. Supervision, materials, equipment, transportation, labor and all other incidentals necessary to complete the work.
2. DRAWINGS: Drawings and the accompanying specifications are the property of the Government and comprise legal documentation that pertains exclusively to this project. Drawings will be made available in a format determined by the solicitation method. CEU Cleveland will not provide hard copies of drawings.
  - 2.1 Construction Drawings:

T-7185-CD	TITLE SHEET/LOCATION MAP	SHT 1 of 3
T-7186-CD	SITE PLANS	SHT 2 of 3
T-7187-CD	CONSTRUCTION DETAILS	SHT 3 of 3

### SECTION 01 14 00 CONTRACTOR WORK HOURS

1. WORK HOURS: The Contractor will be permitted to perform construction work through the hours of 7:00 am and 4:30 PM Mondays through Thursdays. The Coast Guard base hosts recruit graduations on most Fridays year round. The contractor shall expect increased automobile and pedestrian traffic on Fridays. Excessive noise and other disruptive activities shall be limited on Fridays between the hours of 10:00 am and 12:00 during graduation ceremonies unless otherwise approved by the COR. No major deliveries shall be scheduled between 8:00 and 12:00. Note any departures from these work hours on the Daily Reports.

2. SATURDAY, SUNDAY AND HOLIDAYS: The contractor shall provide the Contracting Officer's 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 for Submittals. 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".
4. ACCESS TO BASE: Prior to commencement of the contract, the Contractor and all sub-contractors are required to register with the USCG TRACEN Cape May Security Office. Background screenings will be performed by TRACEN Security for all employees of the Contractor and sub-contractors working on the Base. The Contractor shall contact USCG TRACEN Cape May Security Office at (609) 898-6915 for detailed requirements.

SECTION 01 14 13  
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: During the Solicitation Phase of this Project, two Pre-Bid site visits will be scheduled by the Owner one to two weeks after the release of the Solicitation. It is the responsibility of the contractor to contact the Project Engineer, LT Justin Davis, Facilities Engineering, Design Section, at (609) 898-6406 or Justin.S.Davis@uscg.mil to obtain the specific dates, as no other site visits will be scheduled.

SECTION 01 14 14  
PRE-CONSTRUCTION SITE CONDITIONS

1. SITE CONDITION VERIFICATION: The Contractor shall verify the conditions of the existing site, equipment and facilities potentially affected by the work under this contract. When designated on the submittal list, the contractor shall photograph and/or videotape the conditions in order to document their pre-construction condition. Copies of the photos and videos shall be submitted to the Contracting Officer prior to starting work.

SECTION 01 14 16  
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 Representative at least five working days in advance of any planned outages of water, electrical, telephone, or sanitary facilities. Notify the Contracting Officer's Representative at least one week prior to beginning construction.
2. TRAINING CENTER REGULATIONS:
  - 2.1 The Contractor, his employees, and subcontractors shall become familiar with and obey all Training Center 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.
  - 2.3 Storage Areas: The Contracting Officer's Representative will determine exact location and boundaries of staging areas. Under no circumstances shall materials be stored in areas that will interfere with aircraft 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.

SECTION 01 14 19  
FIELD ADJUSTMENTS

1. The Contracting Officer's 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 01 18 14  
BUILDING PERMITS

1. NO BUILDING PERMITS from state or local governments are required for work performed on federal property.

SECTION 01 18 17  
ENVIRONMENTAL PERMITS

1. Unless directed by other sections of this specification, the Contractor will not be responsible for obtaining environmental permits.

SECTION 01 26 13  
REQUESTS FOR INFORMATION

1. SUMMARY:

- 1.1 Section Includes: Administrative requirements for requests for information.

2. DEFINITIONS:

- 2.1 Request for Information: A document submitted by the Contractor requesting clarification of a portion of the contract documents, hereinafter referred to as RFI (Request for Information).

- 2.2 Proper RFIs: A properly prepared request for information shall include a detailed written statement that indicates the specific Drawings or Specification in need of clarification and the nature of the clarification requested.

- A. RFIs shall be sequentially numbered.
- B. Drawings shall be identified by drawing number and location on the drawing sheet.
- C. Specifications shall be identified by Section number, page and paragraph.

- 2.3 Improper RFIs: RFIs that are not properly prepared.

- A. Improperly prepared RFIs will not be processed by the Contracting Officer, but will be returned unprocessed.

- 2.4 Frivolous RFIs: RFIs that request information that is clearly shown on the Contract Documents.

- A. Frivolous RFIs may be returned unprocessed.

3. CONTRACTOR'S REQUESTS FOR INFORMATION:

- 3.1 During Bid Phase: Bidders shall submit all questions, in writing, to the Contracting Officer. Requests for Information (RFI) shall be submitted no later than five (5) business days prior to the bid due date. RFIs will be addressed by the USCG three (3) business days prior to the bid due date.

- 3.2 During Construction Phase: When the Contractor is unable to determine from the Contract Documents, the material, process or system to be installed, the Contracting Officer shall be requested to make a clarification of the indeterminate item.
- A. Wherever possible after contract award, such clarification shall be requested at the next site visit by the Contracting Officer's Representative (COR), with the response entered on the daily reports. When clarification at the COR's site visit is not possible either because of the urgency of the need, or the complexity of the item, Contractor shall prepare and submit an RFI to the Contracting Officer.
  - B. Contractor shall endeavor to minimize the number of RFIs. In the event that the process becomes unwieldy, in the opinion of the Contracting Officer because of the number and frequency of the RFIs submitted, the Contracting Officer may require the Contractor to abandon the process and submit future requests as either submittals, substitutions or requests for change.
  - C. RFIs shall be submitted on the form provided by the Contracting Officer. Forms completely filled in, and if prepared by hand, shall be fully legible after photocopying, scanning or fax transmission. Each page of the attachments to RFIs shall bear the RFI number in the upper right corner.
  - D. RFIs shall be originated by the Prime Contractor.
    - 1. RFIs from subcontractors or material suppliers shall be submitted through, reviewed by, and signed by the Prime Contractor prior to submitting to the Contracting Officer.
    - 2. The Contracting Officer will neither act on nor respond to RFIs received directly from subcontractors or suppliers.
  - E. Contractor shall carefully study the Contract Documents to assure that the requested information is not available therein. RFIs which request information available in the Contract Documents will be deemed either Improper or Frivolous as defined above.
  - F. In cases where RFIs are issued to request clarification of coordination issues, for example, pipe and duct routing, clearances, specific locations of work shown diagrammatically, and similar items when feasible, Contractor shall fully lay out a suggested solution using drawings or sketches drawn to scale, and submit with the RFI.
  - G. RFIs shall not be used for the following purposes:
    - 1. To request approval of submittals.
    - 2. To request approval of substitutions.
    - 3. To request changes which entail additional cost or credit.



4. To request different methods of performing work than those drawn and specified.
- H. In the event the Contractor believes that a clarification by the Contracting Officer results in additional cost or time, the Contractor shall not proceed with the work indicated by the RFI until a modification is prepared and approved. RFIs do not automatically justify a cost increase in the work or a change in the project schedule.
  1. Answered RFIs shall not be construed as approval to perform extra work.
- I. Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Contracting Officer, Contractor shall furnish copies of the log showing outstanding RFIs. Contractor shall note unanswered RFIs in the log.
- J. Contractor shall allow up to 14 days review and response time for RFIs, however, the Contracting Officer will endeavor to respond in a timely fashion to RFIs.
- K. The Government reserves the right to issue a change order to expedite the work per FAR Clause 52.243-4, Changes.

#### 4. CONTRACTING OFFICER'S RESPONSE TO RFIs:

- 4.1 Contracting Officer will respond to RFIs on one of the following forms:
  - A. Proper RFIs:
    1. Change Order
    2. Request for Proposal
  - B. Improper or Frivolous RFIs:
    1. Unprocessed RFIs will be returned with a stamp or notation: Not Reviewed.
  - C. Answers to properly prepared RFIs may be made directly upon the RFI form with supplementary instructions as necessary.

### SECTION 01 31 19 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-Construction 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 construction.

- 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 01 32 16  
CONSTRUCTION SCHEDULE, SCHEDULE OF VALUES,  
AND PROGRESS SCHEDULE

1. In accordance with the Notice to Proceed letter, the Contractor shall submit the following:
  - 1.1 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:
    - A. 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. Major work categories should include but are not limited to mobilization, carpentry, plumbing, mechanical, electrical, roofing, concrete, site work, and demobilization. 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.
    - B. The duration of each work category.
    - C. Any concurrent work categories.
  - 1.2 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.
    - A. Format - The line items in the Schedule of Values shall be the same as that of the Construction Schedule.
    - B. 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.
    - C. 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:
  - 2.1 Progress Schedule-This schedule shall be an update of the Construction Schedule. It shall show the current schedule of all work.
    - A. 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 01 32 26 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 immediately to the Contracting Officer at (216) 902-6278.
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 COR when the contractor fails to submit daily reports.

SECTION 01 33 00  
SUBMITTAL PROCEDURES

1. GENERAL: The Contractor shall submit to the COR and Contracting Officer, one (1) electronic copy in “.pdf” format 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. Both sides of Contract Item Acceptance Request sheet shall be submitted. The sheet shall be signed and dated by the Contractor.
  - 2.1 The Contract Item Acceptance Request and the item information shall be consolidated into one .pdf file and one email. Email to the COR and Contracting Officer. Manage email size so as not to exceed the limit allowed by the Coast Guard system. If the email is rejected by the system, reduce the file size and resubmit.
  - 2.2 Up to eleven (11) items may be listed on an individual approval 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*).
  - 2.3 Submittals shall be forwarded to the COR and 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" to request a 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. DEVIATIONS
  - 3.1 Deviation from specification:
    - A. The COR and Contracting Officer will consider requests for deviations/substitutions only if submitted within fifteen (15) calendar days after award.
    - B. Deviations may be considered when a product becomes unavailable through no fault of the Contractor.

- C. The Contractor shall document each request with complete data substantiating compliance of proposed deviation with the Contract documents. *Request for deviation shall not be submitted on a Request for Information (RFI) form.*
  - D. A request constitutes a representation that the Contractor:
    - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
    - 2. Will provide the same warranty for deviation as for specified product.
    - 3. Will coordinate installation and make changes to other work which may be required for the work to be completed at no additional cost to the Government.
    - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
    - 5. Will reimburse the Government for review or redesign services associated with re-approval by the COR and Contracting Officer.
  - E. If the deviation has a lesser value than the product originally specified, the Contractor shall provide a credit to the Government.
  - F. Deviations will not be considered when they are indicated or implied on Shop Drawings or Product Data submittals, without a separate written request, or when acceptance will require revisions to the Contract documents.
- 3.2 Deviation submittal procedures:

- A. The Contractor shall mark the “Deviation” block on the Contract Item Acceptance Request (CIAR) form and provide the information stated in Paragraph 3.1 above.
- B. The Contractor shall submit shop drawings, product data, and certified test results attesting to proposed product equivalence. Burden of proof is on the Contractor.
- C. The COR and Contracting Officer will then review the “deviation” request and either accept or reject the deviation. The COR and Contracting Officer’s acceptance of the deviation signifies that the Contractor has provided the information required in Paragraph 3.1. If a credit is due the government, the Contracting Officer will notify the Contract Specialist and the deviation will be processed utilizing the Change Request procedures for a modification to the contract/task order.
- D. The COR and Contracting Officer will notify the Contractor of acceptance/rejection of the deviation via an accepted or rejected CIAR. The Contracting Officer will notify the Contractor, in writing, if a modification to the contract is required.

- E. If a request for deviation is received without the documentation stated above, the COR and Contracting Officer will return the submittal to the contractor for the required information.
4. **ACCEPTANCE:** Submittals will be stamped "Accepted, "Accepted with Comment", or "Resubmit". Accepted, Accepted with Comment or Resubmit for each item will be indicated on the Contract Item Acceptance Request form and one copy returned to the Contractor.
- 4.1 **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.
  - 4.2 The actions taken by the Coast Guard are only for general conformity to the contract drawings and specifications and shall not relieve the Contractor from responsibility for error in dimensions and compliance with all terms stipulated by contract.
5. **DEFECTIVE WORK:** Approval 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.
- 5.1 Work started or completed prior to submittal acceptance is **solely** at Contractor's risk and may jeopardize contract performance.
6. **TYPES OF SUBMITTALS:** The paragraphs given below provide descriptions for each type of submittal that may be required within the individual sections of this specification. Refer to the Individual Sections themselves and the List of Submittals document for the required submittals.
- 6.1 **Product Data:** Submit pursuant to this section for review for conformance with contract.
    - A. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
    - B. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
  - 6.2 **Shop Drawings:** Submit pursuant to this section for review for conformance with contract.
    - A. Shop drawing submittals shall be drawings, diagrams, schedules and other data specially prepared for the work of this contract by the contractor or any

subcontractor, manufacturer, supplier or distributor to illustrate a portion of work to be installed under this contract.

- B. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
  - C. When required by individual specification sections, provide shop drawings signed and sealed by professional engineer responsible for designing components shown on shop drawings.
    - 1. Include signed and sealed calculations to support design.
    - 2. Submit drawings and calculations in form suitable for submission to and approval by authorities having jurisdiction.
    - 3. Make revisions and provide additional information when required by authorities having jurisdiction.
- 6.3 Samples: Submit pursuant to this section for review for conformance with contract.
- A. Samples For Selection as Specified in Product Sections:
    - 1. Submit to Contracting Officer's Representative for aesthetic, color, or finish selection.
    - 2. Submit samples of finishes from full range of manufacturers' standard colors, textures, and patterns.
  - B. Submit samples to illustrate functional and aesthetic characteristics of Products, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - C. Include identification on each sample, with full Project information.
  - D. Submit number of samples specified in individual specification sections.
  - E. Reviewed samples which may be used in the Work are indicated in individual specification sections.
  - F. Samples will not be used for testing purposes unless specifically stated in specification section.
- 6.4 Design Data: Submit pursuant to this section for review for conformance with contract.
- A. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
- 6.5 Test Reports: Submit pursuant to this section for review for conformance with contract.

- A. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.
  - B. The testing shall have been performed in a laboratory meeting the requirements specified herein. The tests shall have been performed within three years of submittal of the reports for approval. Test reports shall be accompanied by the certificates from the manufacturer certifying that the material and equipment proposed to be supplied is of the same type, quality, manufacture, and make as tested.
- 6.6 Certifications: Manufacturer's certification furnished by the Contractor on items of materials and equipment incorporated into the work will be accepted only when this method will assure full compliance with the provisions of the contract. Pre-printed certificates will not be acceptable. All certifications shall be in the original. The original of all manufacturers' certifications shall name the appropriate item of equipment or material, specification, standard, or other document specified as controlling the quality of that item and shall have attached thereto certified copies of test data upon which the certifications are based. All certificates shall be signed by the manufacturer's official authorized to sign certificates of conformance or compliance.
- A. When specified in individual specification sections, submit certification.
  - B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- 6.7 Laboratory Reports: Reports shall cite the contract requirements, the test or analysis procedures used, the actual test results, and include a statement that the item tested or analyzed conforms or fails to conform to the specification requirements. Each report shall be conspicuously stamped on the cover sheet in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements as the case may be. All test reports shall be signed by a representative of the testing laboratory authorized to sign certified test reports. The Contractor shall arrange for immediate and direct delivery of the signed original of all reports, certifications, and other documentation.
- 6.8 Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing.
- A. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- 6.9 Manufacturer's Field Reports: When specified in the individual specification sections, submit Manufacturer's Field Reports on tests conducted by manufacturers. Reports shall cite the contract requirements, the test or analysis procedures used, the



actual test results, and include a statement that the item tested or analyzed conforms or fails to conform to the specification requirements. Each report shall be conspicuously stamped on the cover sheet in large red letters "CONFORMS" or "DOES NOT CONFORM" to the specification requirements as the case may be. All test reports shall be signed by a representative of the testing laboratory authorized to sign certified test reports. The Contractor shall arrange for immediate and direct delivery of the signed original of all reports, certifications, and other documentation.

- 6.10 **Manufacturer and Installer Qualifications:** When specified in the individual specification sections, submit qualifications of the manufacturers or installers as required. Qualifications shall include a list of projects of similar nature and a list of five references, minimum, with all contact information. Additional references may be required upon request.
- 6.11 **Manufacturer's Inspection Reports:** When specified in the individual specification section, submit Manufacturer's Inspections Reports prepared by the Manufacturer's Field Representative. Reports shall cite name and contact information of inspector, date of inspection, time on and off the site, weather conditions at time of inspection, contractors on site, number of workmen, equipment, improvements installed, overall quality of work, deficiencies and other concerns, recommended corrective actions and any other information required by the manufacturer.

#### SECTION 01 35 29 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. (see Section 01 56 00, "Lights, Signs & Barricades") as well as complying with the requirements of all applicable Federal, State and Local safety laws, rules and regulations.
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). 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.

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.

SECTION 01 51 00  
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.
2. ELECTRICITY: The Contractor may utilize electrical power from the nearest electrical receptacle or panelboard, subject to availability. OSHA requirements will govern the use of such utility. All equipment used shall be supplied by the Contractor. US Coast Guard does not make any guarantee against any voltage variation or service interruption.
  - 2.1 Utility Outages and Shutdown: Needed power outages shall be arranged only with prior approval from Contracting Officer's Representative (COR), with duration and affected areas held to a minimum.
3. TELEPHONE: Telephone services will not be available for use by the Contractor.
4. WATER HOOKUP: Water will be made available at the nearest hydrant or exterior hose bib. All connections to the water system shall be equipped with back flow protection. Temporary potable water pipes and hoses shall be sterilized before being placed in operation and every time the system is opened to the atmosphere for repair or relocation.
5. 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 01 51 13  
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 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 01 51 16 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 HOT WORK PERMIT

- A. Prior to performing "Hot Work" (welding, burning, lead melting, blowtorches, tar pots, etc.) or operating other flame-producing devices, the contractor shall request a Hot Work permit. This permit will be issued by the Training Center Fire Department through the Contracting Officer's Representative (COR). This permit will be issued only after job site inspection by a member of the Fire Department for a specific task.
  1. All Hot Work will be shut down 30 minutes before the end of work and a fire watch shall be kept at the scene of operation during this 30 minutes.
  2. Extinguishers and Fire Watch Personnel: The contractor shall furnish, in accordance with all applicable requirements of the NFPA (National Fire Protection Association) Standards, sufficient fire extinguishers and fire watch personnel to protect the area in which his work is being performed. The size and type of fire extinguisher used will be subject to review by the Training Center Fire Department through the COR.

### 1.2 BURNING

- A. The burning of trash or other waste material shall be prohibited.

### 1.3 HEATING

- A. All sources of temporary heat shall carry an "Underwriters Laboratory" label and portable heaters shall be located to avoid ignition of combustible materials.
- B. Electrical heaters shall not be connected to extension cords.
- C. Open drumfires are prohibited.

#### 1.4 ELECTRICAL

- A. All portable electric devices (saws, sanders, compressors, lights, extension cords) not required to be left on shall be disconnected at the close of work each day.
- B. All wires plugged into electrical outlets shall be equipped with male plugs. The inserting of the bare ends of wires into outlets is prohibited.

#### 1.5 FLAMMABLES

- A. Oil painting materials (paint, brushes, empty paint cans, rags, paint clothes, drop cloths, etc.) and flammable liquids shall be removed from the building at the close of work each day.
- B. Highly flammable liquids such as paints, thinner, etc. that are to be kept inside buildings shall be held to an absolute minimum except in buildings authorized and designed for such storage.
- C. Storage of gasoline in excess of (5) gallon containers shall be permitted only by specific approval from the Training Center Fire Chief through the Contracting Officer's Representative.
- D. All storage areas containing flammable liquids shall be marked with signs indicating "FLAMMABLES" and "NO SMOKING".

#### 1.6 FIRE HYDRANTS

- A. Fire hydrants shall not be used without approval of the Training Center Fire Department through the Contracting Officer's Representative. Where permission is granted for the use of fire hydrants, the contractor shall be required to furnish a gate valve and backflow preventer to fit the 2 1/2-inch outlets.
- B. The Training Center Fire Department through the Contracting Officer's Representative will have control of the opening and closing of fire hydrants.
- C. A clear space of 15 feet on both sides of fire hydrants shall be maintained at all times.

#### 1.7 EXISTING FIRE DEVICES

- A. Fire hose or extinguishers in existing buildings shall not be removed from their locations, unless specifically indicated to be relocated or removed by the plans and specification for the project. No fire hose or extinguishers shall be used for any purpose other than combating a fire.

1.8 SMOKING:

- A. Smoking is strictly prohibited in all Government buildings. Smoking is only permitted in designated smoking areas. There shall be NO SMOKING or unsupervised open flame permitted inside any structure, temporary or permanent; nor within 25 feet of combustible material or within 50 feet of flammable liquids or compressed gasses.

1.9 FIRE REPORTING

- A. All contractors providing office space or trailers with telephone service shall place or post the fire reporting phone number by the phone. All contractor personnel shall be instructed how to report a fire. Any fire, no matter how small, shall be reported, including those already extinguished, to the Training Center Fire Department immediately. If a Training Center telephone is used, dial extension 6333. If any other telephone is used, dial 911.

SECTION 01 52 13  
FIELD OFFICES

- 1. OFFICE AND STORAGE SHED: A field office for the COR is not required. The Contractor shall provide his own office and storage shed or trailer, if necessary. No equipment or material storage will be provided by the Coast Guard. Locations of the office and sheds shall be provided by the COR at the Pre-Construction meeting.

SECTION 01 55 00  
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 01 55 29  
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. A lay down and parking area for Contractor's vehicles, trailers and personnel will be designated by the Contracting Officer's Representative at the Pre-construction meeting.
2. COORDINATION: Obey all U.S. Coast Guard Parking Signs and traffic rules. Vehicles shall not travel or park on grass. If travel or parking on grass is necessary, grass shall be restored to original condition after completion of the project at no cost to the Government.
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 01 56 00  
LIGHTS, SIGNS & BARRICADES

1. GENERAL: The contractor shall provide and maintain all warning lights, sign, and barriers to insure the safety of pedestrians or vehicles traveling near or through any hazardous area caused by the execution of the Contract work.
  - 1.1 PEDESTRIAN TRAFFIC: The Contractor shall arrange his equipment and/or progression of work, so as not to interfere with the normal flow of pedestrian traffic. Where interference is unavoidable, the contractor shall provide a marked, safe, and clean route around the obstruction
  - 1.2 BARRIERS
    - A. Provide barriers to prevent unauthorized entry to construction areas to protect existing facilities and adjacent properties from damage from construction operations and demolition.
    - B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

SECTION 01 65 00  
RECOVERED MATERIALS NOTICE

1. GENERAL: It is the intent of Training Center Cape May 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 <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program#products>.
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 01 66 13  
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, documented/manifested, transported and disposed of in accordance with all applicable regulations. The manifest for all hazardous waste shall be signed by an authorized Coast Guard representative.
2. USED ELECTRIC LAMPS: 40 CFR 273 requires that 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 be recycled or treated as universal waste. The Contractor shall not dispose of any used electric lamps as solid waste. The Contractor shall recycle all waste electric lamps generated as a result of this work only at a licensed recycling facility.
3. RECYCLABLES: Recycling is a mandatory law of the State of New Jersey.
  - A. At the discretion of the COR, certain items of copper (including insulated cable), aluminum and steel shall remain the property of the Training Center. The Contractor shall separate and deliver these materials to a location at the Training Center designated by the COR. The Contractor shall place these materials in their respective bins or dumpsters.
  - B. The contractor shall recycle or reuse all other material designated as recyclable or prohibited from landfilling. Definitions for recyclables and landfill prohibited material can be obtained from the CMCMUA regulations.
4. 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 01 66 16  
SAFETY DATA SHEETS AND MATERIAL HANDLING PROCEDURES

1. DATA SHEETS: Submit a Safety Data Sheet (SDS) for all materials containing hazardous substances required for contract execution. Information provided in SDS's shall meet the requirements of 29 CFR 1910.1200. SDS'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 SDS'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 01 35 29, "Safety Program"). The Contracting Officer's 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 SDS and all applicable federal, state, and local laws and regulations.

SECTION 01 71 33  
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. CONTRACTOR'S STAGING AND STOCKPILING: The Contractor is responsible for the protection and use of materials for the project inside or outside the facility, including his dumpster and spot a pot used on site. Should the USCG notify the Contractor of a weather emergency such as an impending Hurricane, the Contractor will need to tie-down or move these temporary facilities to higher ground. Hurricane season is from June 1 - November 30.
3. 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.

SECTION 01 74 00  
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 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 Representative, final acceptance will not be approved.

SECTION 01 78 00  
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 Representative review upon request.
2. DISCOVERED UTILITIES: Indicate the exact location and depth 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 with standard drafting practices. Mark-ups shall include supplementary notes, legends, and details necessary to convey the exact representation of construction actually provided. As Built drawings shall be clearly labeled “AS-BUILT” and dated.
5. **SUBMITTAL:** Submit one “.pdf” digital copy and one ANSI D sized (22”x34”) paper copy of the As Built drawings for Contracting Officer and COR 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 01 78 23 OPERATING INSTRUCTIONS AND TRAINING

1. **MANUALS:** Upon completion of the work, but before the work is accepted by the Government, the Contractor must forward one (1) .pdf file and one (1) complete bound set of instructions, tabbed and identified for reference, for all equipment and/or systems provided under this contract. The instructions shall include component parts, manufacturer's certificates, warranty slips, parts lists, descriptive brochures, and manufacturer's maintenance and operating instructions as indicated below.
  - 1.1 Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.
  - 1.2 Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
  - 1.3 Internally subdivide binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
  - 1.4 Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
  - 1.5 Contents: Prepare Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
    - A. Part 1: Directory, listing names, addresses, and telephone numbers of Contracting Officer's Representative, Contractor, Subcontractors, and major equipment suppliers.
    - B. Part 2: Operation and maintenance instructions arranged by process flow and subdivided by specification section. For each category, identify names,

addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:

1. Significant design criteria.
2. List of equipment.
3. Parts list for each component.
4. Operating instructions.
5. Maintenance instructions for equipment and systems.
6. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.

C. Part 3: Project documents and certificates, including the following:

1. Shop drawings and product data.
2. Air and water balance reports.
3. Certificates.
4. Photocopies of warranties

2. TRAINING: When requested by the COR, the Contractor shall provide up to two hours of training, which shall explain to the Government's personnel all procedures necessary to operate and maintain all equipment and systems on a continuing basis. A verification of training shall be provided.



DHS-USCG TRAINING CENTER CAPE MAY, NJ		<b>CONTRACT ITEM ACCEPTANCE REQUEST</b>		
Contract Number		Submittal Number	Submittal New Re-submittal	Date
Project Number			CONTRACTOR MARK IF DEVIATION FROM SPECIFICATIONS	FOR GOVERNMENT USE ONLY
Item No.	Specification Sect. & Para.	DESCRIPTION OF MATERIAL (Include Type, Model No., Catalog No., Mfg., etc.)	Deviation	Status
Contractor		By: (Signature and Date)		
Request as indicated above was received in this office on _____				
Recommend Acceptance or Resubmit as indicated above and subject to any applicable comments.				
Name and Grade		Signature		Date
Acceptance or Resubmit as indicated above and subject to any applicable comments.				
Name and Grade		Signature		Date

Status Abbreviation Guide: AC-Accepted; AC w/CMT-Accepted with Comment; R-Resubmit

## DIVISION 02 – EXISTING CONDITIONS

### SECTION 02 41 13 SELECTIVE SITE DEMOLITION

#### PART 1 GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. Do not begin demolition until authorization is received from the Contracting Officer.
- B. The work of this section is to be performed in a manner that maximizes salvage and recycling of materials.
- C. Remove rubbish and debris from the project site daily.
- D. Permanently remove excess subsoil not being reused from Government property.
- E. In the interest of occupational safety and health, perform the work in accordance with O.S.H.A., US Army Corp of Engineers and ASSE/SAFE requirements and other applicable regulations.

##### 1.2 SUBMITTALS

- A. Demolition Plan
- B. Recycling Plan

##### 1.3 REGULATORY AND SAFETY REQUIREMENTS

- A. Comply with federal, state, and local hauling and disposal regulations.
- B. Comply with the following safety regulations in addition to the regulatory OSHA requirements:
  - 1. Occupational Safety and Health Act (OSHA) 29 CFR 1910.
  - 2. U.S. ARMY CORPS OF ENGINEERS (USACE): EM 385-1-1 (2003) Safety and Health Requirements.
  - 3. American Society of Safety Engineers (ASSE/SAFE): ASSE/SAFE A10.6 (1990; R 1998) Safety Requirements for Demolition Operations.

##### 1.4 PREPARATION

- A. Contact utility mark-out service (1-800-272-1000) ten business days prior to beginning work.
- B. Submit dig request to TRACEN ten business days prior to beginning work.

##### 1.5 PROTECTION

- A. Traffic Control
  - 1. Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades. Anchor barricades in a manner to prevent displacement by wind. Notify the Contracting Officer Representative (COR) prior to beginning such work.
- B. Existing Conditions Documentation

1. Before beginning any demolition or deconstruction work, survey the site and examine the drawings and specifications to determine the extent of the work. Record existing conditions with digital photographs.
- C. Items to Remain in Place
  1. Take necessary precautions to avoid damage to existing items to remain in place. Repair or replace damaged items as approved by the COR. Coordinate the work of this section with all other work indicated. Ensure that structural elements are not overloaded. Repairs require approval by the COR prior to performing such work.
- D. Protection of Personnel
  1. Before, during, and after the demolition work the Contractor shall continuously evaluate the condition of the area being demolished and take immediate action to protect all personnel working in and around the project site.

## PART 2 PRODUCTS (NOT USED)

## PART 3 EXECUTION

### 3.1 EXISTING FACILITIES TO BE REMOVED

- A. Demolish 9 existing fire hydrants at locations shown on contract drawings, down the stems to their connections at the water main.
- B. Demolish 1 existing fire hydrant (No. 1323) at flange connection at grade.
- C. Demolish via clean saw cut, segments of asphalt paving such as necessary to perform excavation.
- D. Excavate subsoil as necessary to facilitate new construction.

### 3.2 DISPOSAL OF REMOVED MATERIAL

- A. Salvageable items: Carefully remove existing fire hydrants for salvage to provide to the TRACEN Cape May Fire Department.
- B. Inspect and evaluate existing materials for recycling. Removed materials are to be separated, set aside, and prepared as specified, and stored or delivered to a collection point for recycling or other disposal.
- C. Remove and dispose of unsalvageable and non-recyclable noncombustible and combustible material off site.
- D. Remove and transport in a manner that prevents spillage on streets or adjacent areas. Apply all federal, state, and local regulations regarding hauling and disposal.

END OF SECTION 02 41 13

## DIVISION 21 – FIRE SUPPRESSION

### SECTION 21 11 16 FACILITY FIRE HYDRANTS

#### PART 1 GENERAL

##### 1.1 GENERAL REQUIREMENTS

- A. Provide and install 9 dry barrel fire hydrants in accordance with NFPA 24 to replace 9 existing hydrants; remove one additional fire hydrant. Flow test and mark hydrants in accordance with NFPA 291.

##### 1.2 REFERENCES

- A. NFPA 24: Standard for the Installation of Private Fire Service Mains and Their Appurtenances, 2019.
- B. NFPA 291: Recommended Practice for Fire Flow Testing and Marking of Hydrants, 2019.

##### 1.3 SUBMITTALS

- A. Fire hydrant Product Data
- B. Geo-textile fabric Product Data
- C. Flow Test results

#### PART 2 PRODUCTS

##### 2.1 FIRE HYDRANTS

- A. Conform to the requirements and test of AWWA C502-94 Standard for Dry Barrel Fire Hydrant, or latest version thereof, as they pertain to the design, component materials, construction and manufacture, except as modified or supplemented hereinafter.
- B. Hydrants shall have published warranty against defects in material or workmanship for a period of ten years from date of manufacture.
- C. Pressure rating: working pressure shall be 150psig tested to 300 psig hydrostatic pressure or greater.
- D. Drain valve: must drain the barrel when the hydrant is closed and seal shut when hydrant is open.
- E. Seat ring and drain ring: must be bronze (ASTM-B-62), shall work in conjunction to form an all bronze drain way, and shall have no less than two openings. If they are in a cast iron shoe, they must be bronze lined and the bronze seat ring must thread into bronze drain ring (or shoe bushing) providing bronze to bronze connection. Seat rings must be o-rings. The 6-inch shoe connection must be a mechanical joint with ample blocking for a sturdy setting as specified. A minimum of eight bolts and nuts is required to fasten the shoe to the lower barrel.
- F. Main valve: compression type closing with the pressure and must not be less than 5-¼ ” in diameter. Composition of the main valve must be molded rubber or neoprene, having durometer harness of 95 +/- 5 and must be not less than 1 inch thick.



- G. Outlet: "Three-way" having two 2-½" hose connections and one 5" pumper nozzle. Hose connection shall be National Standard Hose Coupling Thread. Pumper connection shall be a Cape May Thread (6-¼" OD x 6 TPI 6-614 Thread). All nozzles shall be bronze thread counter clockwise into the nozzle section with o-ring pressure seals and held in place with an acceptable locking device.
- H. Hydrant barrel casting: inside diameter of barrel shall not be less than 6-1/8".
- I. Operating nut: non-rising, pentagonal in shape, measure 1-½" from point to flat at base of nut; bronze.
- J. Hold-down nut: shall incorporate an integral resilient weather seal and open counter clockwise.
- K. Lubrication chamber: must be provided with sealed top and bottom o-rings, filled with lubricant which shall be either oil or grease deigned with thrust collar and threaded operating parts that are automatically lubricated each time the hydrant is cycled. There must be not less than two o-rings separating the lubrications reservoir from the waterway and that portion of the stem contracting these o-rings shall be sleeved with bronze. An anti-friction device must be in place above the trust collar to further minimize operating torque.
- L. Hydrant bonnet: must be attached to the upper barrel by not less than four bolts and nuts, with an inserted flat rubber gasket as a pressure seal.
- M. Direction to open: counterclockwise.
- N. Operating stem: must be two-piece, not less than 1 ¼" diameter of 1 inch by 1 inch square (excluding threaded or machined areas) and must be connected by a breakable coupling near the ground line flange. Screws, pins, bolts or fasteners used in conjunction with the stem coupling must be stainless steel. Ones with threads located in the barrel or waterway shall be of manganese bronze, or other high-quality non-corrodible metal, and all working parts in the waterway shall be bronze to bronze. Downward stem travel shall be limited in the bottom of the hydrant by a one-piece lower valve plate that bottoms out in the hydrant show. Travel stops located in the bonnet or upper valve plate is unacceptable. The interior and exterior of the hydrant show shall be fully coated with not less than 8 mils of fusion bonded epoxy.
- O. Exterior paint: Yellow, to be picked from manufacturers standard color samples. Paint shall be a low VOC (less than 3.0 lb/gal), high gloss (85+ units), enamel paint, suitable for exterior application. Paint shall be free of lead and chromate hazards. Paint shall be dry to the touch within 30 minutes. The contractor shall put up a temporary barricade and "wet paint" sign to prevent handling during the manufacturer's recommended drying time. Primer shall be low VOC (less than 3.0 lb/gal) in accordance with paint coat manufacturer's recommendations.
- P. Fire hydrant shall be of breakable type construction: traffic model type, having upper and lower barrels joined approximately 2-inch above the ground line by a separated and breakable swivel flange providing 260

degree rotation of the upper barrel for proper nozzle facing. This flange must employ not less than 8 bolts.

- Q. Provisions for extensions: all hydrants shall be capable of being extended to accommodate future grade changes without excavation. Compression type hydrants that close with the flow shall have breakable type stem coupling installed at the ground line flange. Extension of this type hydrant shall be made by adding at the ground line flange a new coupling and stem section equal to the length of the extension. Stem extensions made by adding a new section of stem to the threaded section of the stem at the top of the hydrant will not be accepted. Only one extension is allowed.
- R. Bury length: Furnish hydrants for 4' bury unless the plans indicate an invert.
- S. Main valve seats: on compression type hydrants closing with the flow, shall be of such design that incorrect positioning is impossible and that the threads will be adequately guided into position. Arrangements shall also be made to hold the main valve gasket in place during assembly. The main seat shall be made of bronze and threaded into a heavy bronze busing in the hydrant base.
- T. Mating Surfaces: All mating surfaces, such as bonnet to nozzle section, nozzle section to lower barrel, and lower barrel to shoe, must utilize rubber gaskets for sealing and must be held in place by zinc plated bolts and nuts. Other methods, such as snap rings, etc., will not be accepted.
- U. Accessories required: full face ground line flange gaskets, nozzle cap gaskets, drain valve and outlet, cap nuts to seal the bottom end of the stem threads against contact with water, and nozzle cap chains.
- V. Manufacturer Experience Record: No hydrant will be considered which has not been regularly manufactured and in successful continuous use for at least 10 years.

## 2.2 GEOTEXTILE FABRIC

- A. Shall let water pass, but not soil.

## PART 3 EXECUTION

### 3.1 REPLACE FIRE HYDRANTS

- A. Unless otherwise specified on the drawing, assume 4 feet of excavation is required for bidding purposes. If more excavation is required then a change order may be processed.
- B. Ensure existing thrust block is in good condition. If not, pour new thrust block to match existing thrust block. Ensure at least one square foot of surface area contact between thrust block and fire hydrant. Thrust block shall be constructed of 3,000-psi concrete, and 18-in cubed.
- C. Place 8-cubic-feet, or adequate amount to cover drain, of crushed rock, clean gravel or other suitable material to provide reservoir capacity so that the hydrant will completely drain when closed.
- D. Set the hydrant perpendicular with large pumper nozzle facing the nearest curb, at a depth such that the center of the pumper nozzle is not less than

15-inches, nor more than 18-inches, above the nearest grade. Assure that the hydrant is sat at the bury line.

- E. Test fire hydrants to ensure proper operation, function, and draining after installation.
- F. Remove existing fire hydrants and replace with new fire hydrants at all locations shown on the contract drawings. These include:

No.	Location	Make
1204	Pier 3	Kennedy Valve
1215	Bldg. 262 (Admin) & Bldg. 22 (Exchange)	Kennedy Valve
1216	North of Exchange	Kennedy Valve
1304	Seamanship (South)	Kennedy Valve
1326	Air Strip	Mueller Co
1401	VA Clinic, A Side	Kennedy Valve
1406	Gymnasium	Kennedy Valve
1414	Temp Housing Loop, Oceanview Side D	Kennedy Valve
1502	1841 Pennsylvania Ave, Side A	Kennedy Valve

3.2 FIRE HYDRANT REMOVAL

- A. Remove Hydrant No. 1323 located at Fire Fighting Structure site (demo) 01, American Darling Valve.
- B. Remove hydrant. Install cap to flange at grade. Ensure proper gasketing of cap to ensure no leakage.
- C. Backfill area with soil removed. Area should be restored to surrounding conditions.

3.3 STERILIZATION

- A. All hydrants, valves, or other parts installed in the potable water system shall be sterilized by flushing with a 50-ppm hypochlorite water solution. Sterilization shall be accomplished as prescribed by the AWWA Standard C601. All valves shall be open and closed several times during the contact period.

3.4 SYSTEM PRESSURE TESTING

- A. Perform water pressure test on each hydrant after installation in accordance with NAFP 291, Chapter 4.
- B. Piping shall show no sign of leakage.
- C. The CG Fire Department will not conduct this testing. All testing shall be completed by the contractor. The CG FD personnel shall be there to witness the testing.

END OF SECTION 21 11 16

## DIVISION 31 - EARTHWORK

### SECTION 31 23 20 EXCAVATING, BACKFILLING AND COMPACTION

#### PART 1 GENERAL

##### 1.1 WORK DESCRIPTION

- A. Providing and installing clean select fill, sub-base, and base material; excavating existing material; backfilling; compact; and grade the site to the elevations shown on the Contracting Drawings, as specified herein, and needed to meet the requirements of the construction shown in the Contract Documents.

##### 1.2 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on sub base material, general fill and topsoil.

##### 1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.
- C. Material and execution shall comply with New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, with revisions, hereon referred to as the NJDOT Specifications.

#### PART 2 PRODUCTS

##### 2.1 SOIL MATERIALS

- A. BASE COURSE MATERIAL: I-5 or Dense Graded Aggregate as specified in the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, with revisions.
- B. SUB-BASE MATERIAL: I-2 as specified in the New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, with revisions.
- C. SELECT FILL MATERIALS: Subject to the approval of the Contracting Officer, and may be materials that have been removed from on site excavation, (where suitable for reuse), or imported from off-site borrow areas.
  - 1. Excavated material from the job site may be reused if it is free from clay and organic materials.
  - 2. All imported materials shall be predominantly granular, non-expansive soils free from roots and other deleterious matter and

shall conform to New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction designation I-6 thru I-8 paragraph 901.11.

## 2.2 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Contracting Officer.

## PART 3 EXECUTION

### 3.1 FINISH ELEVATIONS AND LINES

- A. All site layout, utility layout and grades shall be established by the Contractor from existing and proposed grades shown on the Contract Drawings.

### 3.2 PROCEDURES

- A. Utilities:
  - 1. Dig Request: At least ten (10) business days prior to any excavation greater than 6 inches deep, the contractor shall submit a completed Dig Request form. The Training Center will then provide utility mark-outs in the project area. The Contractor shall maintain the mark-outs throughout construction. A copy of the approved Dig Request shall be posted at the job site throughout construction for the benefit of subcontractors.
  - 2. Unless shown to be removed, protect all active utility lines shown on the Contract Drawings or otherwise made known to the Contractor prior to excavation.
  - 3. If active utility lines are encountered, and are not shown on the Contract drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that the service is not interrupted.
  - 4. If service is interrupted as a result of work under this Section, immediately restore service by repairing the damaged utility at no additional cost to the Coast Guard.
  - 5. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Contracting Officer and secure his instructions.
- B. Protection of property:
  - 1. Take particular care in protecting benchmarks, structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.
- C. Dewatering:

1. Remove all water, including rainwater, encountered during trench and substructure work by use of pumps, drains, and other Contracting Officer approved methods.
  2. Keep excavations and site construction area free from water.
- D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work performed on or near the site.

### 3.3 EXCAVATION

- A. Perform excavation of every type of material encountered within the limits necessary to perform the work specified in the Contract Documents.
- B. Satisfactory excavated materials: transport to and place in, fill or embank areas within the limits of the Work.
- C. Borrow: obtain material required for fill or embankment in excess of that produced within the grading limits of the Work from borrows areas selected and provided by the Contractor and approved by the COR.
- D. Unauthorized excavation:
  1. Unauthorized excavation consists of removal of materials beyond indicated sub-grade elevations or dimensions without specific instruction from the Contracting Officer.
  2. Elsewhere, backfill and compact unauthorized excavation as specified for authorized excavations, unless otherwise directed by the Contracting Officer.
- E. Stability of excavations:
  1. Slope sides of excavations to 1:1 or flatter, unless otherwise directed by the Contracting Officer.
  2. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.
  3. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.
- F. Shoring and Bracing:
  1. Provide materials for shoring and bracing as may be necessary for safety of personnel, protection of work, and compliance code requirements.
  2. Maintain shoring and bracing in excavations regardless of the time period excavations will be open.
  3. Carry shoring and bracing down as excavation progresses.
- G. Cold weather protection:
  1. Protect excavation bottoms against freezing when atmospheric temperature is less than 35 degrees F.

### 3.4 FILLING AND BACKFILLING

- A. General:
  1. For each classification listed below, place acceptable soil materials in layers to required sub-grade elevations.
  2. In excavations:
    - a. Use satisfactory excavated or borrow material.

3. Under Sub-base Base materials:
  - a. Use satisfactory excavated or borrow material.
4. Under I-5 or DGA Base materials:
  - a. Use satisfactory excavated or borrow material.
  - b. Use sub-base materials.
5. Under asphalt pavements:
  - a. Use I-5 or DGA base materials.
- B. Backfill excavations as promptly as progress of the Work permits, but not until completion of the following:
  1. Acceptance of construction below finish grade.
  2. Removing concrete formwork.
  3. Removing shoring and bracing, and backfilling of voids with satisfactory materials.
  4. Removing trash and debris.
- C. Ground surface preparation:
  1. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious matter from ground surface prior to placement of fills.
  2. Plow, strip, or break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.
  3. When existing ground surface has a density less than that specified under "compacting" for the particular area, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

### 3.5 PLACING AND COMPACTING OF EXCAVATED, BORROW MATERIAL AND SUB-BASE MATERIAL

1. Placing and compacting:
  - a. Compact sub grade prior to placement of select fill.
  - b. Place and compact fill at a maximum of 8" lifts.
  - c. Place and compact sub-base course a maximum of 8" lifts.
2. Lawn and unpaved areas: Compact the top 8" of sub-grade at 85 percent of maximum density.
3. Trench: Backfill and compact to 95% compaction to 8" of finished grade.
4. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.
5. Compact each layer to required percentage of maximum density for area.
6. Do not place backfill or fill material on surfaces that are muddy, frozen, or containing frost or ice.
7. Place backfill and fill materials evenly adjacent to structures, to required elevations.

8. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.

### 3.6 GRADING

#### A. General:

1. Uniformly grade the areas within limits of grading under this Section, including adjacent transition areas.
2. Smooth the finished surfaces within specified tolerance.
3. Compact with uniform levels or slopes between points where elevations are shown on the Contract Drawings, or between such points and existing grades.
4. Where a change of slope is indicated on the Contracting Drawings, construct a rolled transition section having a minimum radius of approximately 8'0", unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.

### 3.7 PLACING AND COMPACTING SUBGRADE, I-5 AND DGA BASE COURSE MATERIAL

- A. Control soil compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D6938. If material does not meet the required density, perform additional compaction and retest at no additional costs to the Government.
- B. Compact the top 8" of sub-grade and each layer of fill material at 95 percent of maximum density.

END OF SECTION 31 23 20



## DIVISION 32 – EXTERIOR IMPROVEMENTS

### SECTION 32 12 16 ASPHALT PAVING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Asphalt materials.
  - 2. Aggregate materials.
  - 3. Aggregate sub-base.
  - 4. Asphalt paving base course and surface course.

##### 1.2 REFERENCES

- A. New Jersey Department of Transportation:
  - 1. NJDOT Specifications – Standard Specifications for Road and Bridge Construction, 2019, with revisions.
- B. Asphalt Institute:
  - 1. AI – Asphalt Handbook.
- C. ASTM International:
  - 1. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.

##### 1.3 SYSTEM DESCRIPTION

- A. Provide and install bituminous concrete Hot Mix Asphalt (HMA) paving including base and surface courses to repair paving demolished to meet the requirements of the construction shown in the Contract Documents. Furnish all materials, equipment, transportation, labor and all other incidentals necessary to complete the work.

##### 1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit product data for tack coat, prime coat and joint filler.
- C. Design Data: Submit design data for bituminous concrete base course (hot mix asphalt) and bituminous concrete surface course (hot mix asphalt).

##### 1.5 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.

- C. Material and execution shall comply with New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, with revisions, hereon referred to at the NJDOT Specifications.
- D. Comply with the requirements of the “Asphalt Handbook” by the Asphalt Institute, latest edition.
- E. Maintain one copy of the Contract Documents on site.

1.6 DEFINITIONS:

- A. Whenever in this specification the following abbreviation is used, it shall be interpreted as follows:
  - 1. NJDOT Specifications: New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019, with revisions.
  - 2. ENGINEER: Whenever the term engineer is used in the NJDOT Specifications, it shall be considered to mean Contracting Officer’s Representative, herein referred to as the COR.

1.7 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum 3 years documented experience.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Do not place asphalt mixture when ambient air or base surface temperature is less than 40 degrees F, or surface is wet or frozen.
- B. Place asphalt mixture when temperature is not more than 15 degrees F less than initial mixing temperature.

PART 2 PRODUCTS

- 2.1 GENERAL: All materials required for this project shall be furnished by the Contractor. All work shall conform to the plans and specifications, and shall be from approved sources. Only materials which have been approved by the Contracting Officer or COR shall be used.
- 2.2 I-5 and DENSE GRADED AGGREGATE (DGA) BASE COURSE; pursuant to Section 31 23 20.
- 2.3 TACK COAT; shall be as specified in the NJDOT Specification, Section 404.02.
- 2.4 PRIME COAT; shall be as specified in the NJDOT Specification, Section 404.02.
- 2.5 BITUMINOUS CONCRETE BASE COURSE; shall be minimum of three inch thick I-2 mix as specified in the NJDOT Specification, Section 903

- 2.6 BITUMINOUS CONCRETE SURFACE COURSE; shall be minimum two inch thick I-5 mix as specified in the NJDOT Specification, Section 903.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify utilities indicated under paving are installed with excavations and trenches backfilled and compacted.
- B. Verify compacted sub-base is dry and ready to support paving and imposed loads.
  - 1. Proof roll sub-base with roller in minimum two perpendicular passes to identify soft spots.
  - 2. Remove soft sub-base and replace with compacted fill.
- C. Verify gradients and elevations of base are correct.
- D. Verify inlet and manhole frames and valve boxes and all other utility castings are installed and adjusted in correct position and elevation. Reset utility castings as required to meet final grades.

#### 3.2 I-5 or DGA BASE COURSE

- A. Prepare Base Course in accordance with NJDOT Specifications.
- B. Base Course shall be a minimum 6" layer installed and compacted in accordance with Section 31 23 20, and shall be dry and free from frost prior to the start of any paving.

#### 3.3 PRIME COAT

- A. Apply prime coat to DGA base course at a rate of 0.15-0.35 gallons per square yard.
- B. Apply prime coat in accordance with NJDOT Specifications.
- C. Use clean sand to blot excess primer.

#### 3.4 TACK COAT

- A. Apply tack coat at a rate of 0.05 gallons per square yard minimum.
- B. Apply tack coat in accordance with NJDOT Specifications.
- C. Apply tack coat to contact surfaces of curbs and gutters.
- D. Coat surfaces of manhole and catch basin frames and utility castings with oil to prevent bond with asphalt paving. Do not tack coat these surfaces.

#### 3.5 ASPHALT PAVING

- A. Place bituminous concrete base course within 24 hours of applying primer or tack coat.
- B. BITUMINOUS CONCRETE BASE COURSE; (Hot Mix Asphalt); shall be installed and compacted to a minimum finished depth of 3", shall be installed in one pass and shall be applied as specified in the NJDOT Specifications, Section 401.03.

- C. Place bituminous concrete base course within 24 hours of placing and compacting binder course. When binder course is placed more than 24 hours before placing wearing course, clean surface and apply tack coat before placing wearing course.
  - D. BITUMINOUS CONCRETE SURFACE COURSE; (Hot Mix Asphalt); shall be installed and compacted to a minimum finished depth of 2", shall be installed in one pass and shall be applied as specified in the NJDOT Specifications, Section 401.03.
  - E. Compact each course by rolling to specified density. Do not displace or extrude paving from position. Hand compact in areas inaccessible to rolling equipment.
  - F. Perform rolling with consecutive passes to achieve even and smooth finish, without roller marks.
- 3.6 ERECTION TOLERANCES
- A. Flatness: Maximum variation of 1/4 inch measured with 10 foot straight edge.
  - B. Scheduled Compacted Thickness: Within 1/4 inch.
  - C. Variation from Indicated Elevation: Within 1/4 inch.
- 3.7 FIELD QUALITY CONTROL
- A. Take samples and perform tests in accordance with NJDOT Specifications.
  - B. Asphalt Paving Mix Temperature: Measure temperature at time of placement.
  - C. Asphalt Paving Density: ASTM D2950 nuclear method; test each asphalt course at four (4) locations. When tests indicated compaction does not meet specified requirements, continue compaction and retest.
  - D. Perform not less than 4 compaction tests.
- 3.8 PROTECTION OF FINISHED WORK
- A. Immediately after placement, protect paving from mechanical injury for three hours or until surface temperature is less than 140 degrees F.

END OF SECTION 32 12 16

## DIVISION 32 – EXTERIOR IMPROVEMENTS

### SECTION 32 92 27 LAWN RESTORATION

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section Includes:
  - 1. Topsoiling
  - 2. Fertilizing.
  - 3. Seeding.
  - 4. Mulching.
  - 5. Maintenance.

##### 1.2 REFERENCES

- A. New Jersey Department of Transportation
  - 1. NJDOT Specifications – New Jersey Department of Transportation Standard Specifications for Road and Bridge Construction, 2019.
- B. ASTM International:
  - 1. ASTM D 5268 Standard Specification for Topsoil Used for Landscaping Purposes.
- C. Association Of Official Seed Analysts
  - 1. AOSA – Rules for Testing Seeds

##### 1.3 DEFINITIONS

- A. Weeds: Vegetative species other than specified species to be established in given area.

##### 1.4 SYSTEM DESCRIPTION

- A. Provide and install all topsoil, soil amendments, fertilizers, lime, mulches, grass and all other material required to provide a good stand of grass at locations disturbed by the construction operations. Furnish all material, equipment, transportation, labor and all other incidentals necessary to complete the work.

##### 1.5 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data for seed mix, fertilizer, mulch and other accessories.
- C. Certification of grass seed from seed vendor for each grass-seed mixture stating the botanical and common name and percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.

## 1.6 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, germination percentage, inert matter percentage, weed percentage, year of production, net weight, date of packaging, and location of packaging.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- C. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.

## 1.7 QUALIFICATIONS

- A. Seed Supplier: Company specializing in manufacturing Products specified in this section with minimum three years documented experience.
- B. Installer: Company specializing in performing work of this section with minimum three years documented experience.

## 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

## 1.9 COORDINATION AND SCHEDULING

- A. Coordinate installation of planting materials during the final phases of the project.

## 1.10 MAINTENANCE

- A. Begin maintenance of lawns immediately after each area is planted.
- B. Establish lawns by watering, fertilizing, weeding mowing, trimming, replanting, and other operations. Roll, re-grade, and replant bare or eroded areas and re-mulch to produce a uniformly smooth lawn.
- C. Watering: Provide and maintain temporary piping, hoses, and lawn-watering equipment to convey water from sources. Water newly seeded areas a minimum of two times prior to final completion.

## PART 2 PRODUCTS

### 2.1 GRASS MATERIALS

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with the Association of Official Seed Analysts' "Rules for Testing Seeds" for purity and germination tolerances.
  - 1. Seed Mixture: Provide seed of grass species and varieties, proportions by weight, and minimum percentages of purity and germination as indicated below:

## SEED MIXTURE SCHEDULE

<u>Name</u>	<u>Pure Seed</u>	<u>Germ</u>	<u>Origin</u>
RENEGADE H2O TALL RESCUE	30%	90%	OREGON
RENEGADE DT TALL FESCUE	30%	90%	OREGON
FINELAWN H2O TALL	30%	90%	OREGON
BALBOA KENTUKY BLUEGRASS	10%	85%	OREGON

### 2.2 TOPSOIL

- A. Topsoil: ASTM D 5268, pH range of 5.8 to 7.0 percent organic material minimum, free of stones 1 inch or larger in any dimension, and other extraneous materials harmful to plant growth.
  - 1. Topsoil Source: Reuse surface soil stockpiled on the site. Verify suitability of surface soil to produce topsoil meeting specified requirements and modify existing soil when necessary. Supplement existing soil with imported topsoil when quantities are insufficient. Clean topsoil of roots, plants, sods, stones, clay lumps, and other extraneous materials harmful to plant growth.

### 2.3 FERTILIZER

- A. Bone meal: Commercial, raw, finely ground; minimum of 4 percent nitrogen and 20 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea-form, phosphorous, and potassium in the following composition:
  - 1. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing lab.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Examine areas to receive landscaping for compliance with requirements and for conditions affecting performance of work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

### 3.2 RECONDITIONING LAWNS

- A. Recondition existing lawn areas damaged by Contractor's operations, including storage of materials or equipment and movement of vehicles. Also recondition lawn areas where settlement or washouts occur or where minor re-grading is required.

### 3.3 SEEDING LAWNS

- A. Evenly distribute seed with a spreader or seeding machine. Do not broadcast or drop seed when wind velocity exceeds 5 M.P.H.
  - 1. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.
- B. Seeding Rate: Sow seed at 3 lbs to 4 lbs per 1000 square feet
- C. Rake seed lightly into top 1/8 inch of topsoil, roll lightly, and water with fine spray.
- D. Protect seeded areas with slopes less than 1:6 against erosion by spreading straw mulch after completion of seeding operations. Spread by hand, blower, or other suitable equipment.

### 3.4 CLEANUP AND PROTECTION

- A. During lawn establishment, keep pavements clean and work areas in an orderly condition.
- B. Protect lawn from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

### 3.5 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove surplus soil and waste materials, including excess subsoil, unsuitable soil, trash, and debris, and legally dispose of it off Coast Guard property.

END OF SECTION 32 92 27