

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

TABLE OF CONTENTS

DIVISION 01 – GENERAL REQUIREMENTS

<u>Section</u>	<u>Title</u>	<u>No. of Pages</u>
00800	Special Contract Requirements	20
01012	Design After Award	19
01320	Project Schedule: Network Analysis System	12
01330	Submittal Procedures Design/Build Construction	6
01420	Safety	6
01451	Contractor Quality Control Design-Build Construction	12
01452	Testing for Mechanical and Electrical Systems	3
01500	Temporary Construction Facilities	4
01525	Safety Requirements	16

SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

00800.1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK.

a. The Contractor shall be required to (I) commence work under this contract within 5 calendar days after the date the Contractor receives the notice to proceed, (ii) prosecute the work diligently, and (iii) complete the entire work ready for use not later than 540 calendar days after the date the Contractor receives the notice to proceed, except in case the Contracting Officer determines that seeding is not feasible during the construction period, the Contractor shall accomplish such seeding in the first planting period following the contract completion date. This action will not operate to extend the performance time for the balance of the work. The time stated for completion shall include final cleanup of the premises.

b. **KEY PERSONNEL, SUBCONTRACTORS AND OUTSIDE ASSOCIATES OR CONSULTANTS:** In connection with the services covered by this contract, any in-house personnel, subcontractors, and outside associates or consultants will be limited to individuals or firms that were specifically identified and agreed to during negotiations. The contractor shall obtain the Contracting Officers written consent before making any substitution for these designated in-house personnel, subcontractors, associates, or consultants.

c. **Location:** The site of work is located at Fort Drum, New York. The site of the work is on a military reservation and all rules and regulations issued by the Commanding Officer covering general safety, security, and sanitary requirements, etc., shall be observed by the Contractor.

d. The Contractor shall furnish all labor, materials, equipment, and services (except those furnished by the Government) for the following work: construction of Fuel Truck Storage Building.

e. All work shall be in accordance with the drawings and specifications or instructions attached hereto and made a part thereof, or to be furnished hereafter by the Contracting Officer and subject, in every detail, to his supervision, direction, and instructions.

00800.2 RECORD DRAWINGS.

a. **General:** The Contractor shall maintain as-built drawings during the construction period and shall submit final record drawings at the completion of individual facilities. The Government will provide to the Contractor the CAD (Computer-Aided Drafting) drawing files on electronic disks in microstation 8.0 format. The Contractor is required to make prints from the CAD files and continuously maintain drawings to show current as-built conditions for the duration of the construction. Except for updates as indicated below, the Contractor may maintain as-built drawings by marking up drawings by hand or by CAD methods. Scanned drawings will not be acceptable.

b. **Progress As-built Prints:** During construction the Contractor is responsible for maintaining one set of up to date paper prints to show as-built construction conditions. These prints shall be kept current and available on the job site at all times. All changes from the contract drawings that are made in the work or additional information, which might be uncovered in the course of construction, shall be accordingly recorded as they occur by means of details and notes. The Contracting Officer's Representative and a responsible representative of the Contractor prior to submission of each monthly pay

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

estimate will jointly inspect the as-built prints for accuracy and completeness. Progress as-builts shall show at a minimum the following information:

- (1) The location and description of any utility lines, valves, or other installations of any kind within the construction area. The location includes dimensions to permanent features within +/- 6" of actual dimensions.
- (2) The location and dimensions of any changes with the building and structure.
- (3) Correct grade or alignment of roads, structures or utilities if any changes were made from the contract plans.
- (4) Correct elevations if changes were made in site grading.
- (5) Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor including but not limited to fabricated, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.
- (6) The topography and grades of all drainage installed or affected as part of the project construction.
- (7) All changes, which result from contract modifications.
- (8) Where contract drawings or specifications allow options, only the option selected for construction shall be shown on the as-built prints.
- (9) All amendments to the contract drawings issued during the solicitation period shall be posted on the as-built drawings.

c. Protection of Records: The Contractor shall be responsible for the protection and safety of prints and CAD records until returned to the Contracting Officer. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at his expense.

d. As-Built Updates: At the 25%, 50%, and 75% completion point in construction of this project as determined by progress payments) the Contractor shall update the CAD files of the project drawings in the appropriate CAD program to show as-built conditions and submit one set of CAD prints to the Contracting Officer for approval. The submission shall only include drawings that have incurred changes. The intent of the submission is to demonstrate construction changes as marked on the progress as-builts, are being made in the CAD files at regular intervals. The Contractor shall make any required corrections before payment will be approved for this item.

e. Preliminary Record Drawing Submittal: At least 30 calendar days before the anticipated date of final acceptance inspection the Contractor shall deliver 2 copies of progress prints showing final as-built conditions to the Contracting Officer for review and approval. These prints shall correctly show all the features of the project as it has been constructed, adding such additional drawings as may be necessary. Drawings shall be printed from the CAD files updated in the appropriate CAD program. Within 10 days, the Government will provide the Contractor one set of prints indicating required corrections to the preliminary submittal. The Contractor shall correct and resubmit within 5 days. Any

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

required subsequent review and resubmission periods shall each be accomplished within 5 days. Upon Government approval of the preliminary submittal, the Contractor shall prepare final record drawings.

f. Record Drawing Submission: In the appropriate CAD program each drawing shall be marked with the words "RECORD DRAWING AS-BUILT" followed by the name of the Contractor in font which will print at least 3/16" high. All revisions to the original contract drawings will be dated in the revision block. All prints must be reproduced from the updated CAD files. A minimum of 5 calendar days before the anticipated date of final acceptance inspection of the project the Contractor shall deliver to the Contracting Officer:

- Three (3) CD's of CAD files of Record Drawings.
- One (1) copy of prints of Record Drawings.

Failure to make an acceptable submission of Record Drawings will delay the Final Acceptance Inspection for the project and will be cause for withholding any payment due the Contractor under this contract.

g. Property: All paper prints, reproducible drawings and CAD files will become property of the Government upon final approval. Approval and acceptance of the final record drawings will be accomplished before final payment is made to the Contractor.

h. Shop Drawings: Upon completing the work under this contract, the Contractor shall furnish a complete set of all shop drawings as finally approved. These drawings shall show all changes and revisions made up to the time the equipment is completed and accepted.

00800.3 AVAILABILITY AND USE OF UTILITY SERVICES.

a. The Government shall make all reasonable amounts of utilities, except for electric for temporary heat, available to the Contractor from existing outlets and supplies, as specified below.

b. The Contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the Government, the Contractor shall remove all temporary connections, distribution lines, meters and associated paraphernalia.

c. Temporary Heating:

(1) The Contractor shall be responsible to provide heat and maintain building temperature at 55 degrees F, 24 hours a day for areas of work, for the duration of the contract. Electric heat shall require Contracting Officer approval. Open flame heaters are prohibited.

d. The prevailing rates that will be charged to the Contractor for utility usage will be as follows:

Gas:\$0.8837/THERM	Electric: \$0.88/KWH
Water: \$2.9093/1000 GAL	Sewer \$3.9479/1000gal

e. The government shall make all reasonable amounts of utilities available to the contractor from existing outlets and supplies. Unless otherwise provided in the contract, the amount of each utility service consumed shall be charged to or paid for by the contractor at prevailing rates charged to the government

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

or, where the utility is produced by the government, at reasonable rates determined by the Contracting Officer. The contractor shall carefully conserve any utilities furnished without charge.

f. The contractor, at its expense and in a workmanlike manner satisfactory to the Contracting Officer, shall install and maintain all necessary temporary connections and distribution lines, water line backflow prevention devices and all meters required to measure the amount of each utility used for the purpose of determining charges. Before final acceptance of the work by the government, the contractor shall remove all temporary connections, distribution lines, meters and associated paraphernalia.

g. All costs associated with the above rates are the Contractor's responsibility and shall be included in the Base Bid price.

00800.4 LIQUIDATED DAMAGES-CONSTRUCTION.

a. If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum of \$800.00 for each day of delay.

b. If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

c. If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

At a time before the project is physically complete but is functionally complete to the satisfaction of the Government, the Government at its sole discretion may agree to accept transfer of the facility or project provided that the remaining work to be done ("punchlist") is completed no later than 30 days from the date of transfer. In this case the contractor shall pay liquidated damages for punchlist items not completed in the daily amount of \$256.00 per day commencing after 30 days of project transfer or after date required for project completion (including all extensions), whichever occurs later.

00800.5 ROAD CLOSURES AND UTILITY OUTAGES.

a. Utility Outages:

(1) The Contractor is advised that the existing utilities service other buildings or areas adjacent to the specific work sites. These buildings will be active and utilized for the entire period of this contract. The Contractor shall maintain all utilities and systems operational at all times except outages approved by the Contracting Officer.

(2) All utility outages shall be scheduled by the Contractor and approved by the Contracting Officer. No outage will be approved which will adversely affect the current operation or mission accomplishment. Outages shall only be approved to perform tie-ins of new or temporary utilities to existing lines. The Contractor shall request, in writing, the Contracting Officers approval, of any proposed outages at least 14 calendar days prior to the date of the proposed outage. The Contractor shall also be responsible for any repairs or start-up procedures in the affected facilities caused by the outages. The Contractor shall coordinate with the Contracting Officer and representatives of the Installation regarding the work that the Contractor must accomplish in various buildings to re-establish the utilities to proper working conditions. The request for the approval of a utility outage shall include, at minimum, the following: description of the utility;

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

time and duration of the outage; areas and systems affected; proof that all preparatory work is complete; proof that all necessary materials, equipment and manpower are in place; utility lines have been verified; and a contingency plan is in place.

(3) Times frames during which the Contracting Officer may approve utility outages:

Electrical Services:

2200 to 0400 hours, Monday – Friday (daily)

Domestic Water:

2200 to 0400 hours, Monday – Friday

Fuel (Natural) Gas:

2200 to 0400 hours, Monday – Friday (daily)

Sanitary Drainage:

2200 to 0400 hours, Monday – Friday (daily)

Fire Detection/Alarm:

0700 to 1400 hours, Monday – Friday. Maximum duration of two (2) hours, subject to contingency plan.

Fire Protection Systems:

0700 to 1400 hours, Monday – Friday. Maximum duration of two (2) hours, subject to contingency plan.

Telecommunications (telephone, LAN, CATV):

2200 to 0400 hours, Monday – Friday. Maximum duration of four (4) hours.

(4) The Contractor shall have on-site all materials, equipment, manpower, etc. to complete all work during the approved duration of the outage. All utilities and systems shall be fully tested and operational prior to the end of the approved outage. Unscheduled outages shall be repaired immediately. Repairs and corrective actions shall proceed continuously in a diligent manner until all services and utilities are restored to their original condition.

- a. Road Closures: Road closures shall not be allowed. Utility installations that affect the roads shall be accomplished in manner to provide through-traffic at all times. In this regard, the Contractor shall provide plates, install utilities in one half of the road at one time; provide temporary access, etc. The Contractor shall submit to the Contracting Officer, a proposed plan indicating how the work is to be performed in road areas and how through-traffic will be maintained. The Contractor shall provide temporary protection, signage, flagmen and traffic controls to maintain free vehicular movement as shown on the plans. Temporary protection, signage and traffic controls shall comply with New York State Department of transportation requirements. The plan shall be submitted 30 calendar days prior to initiating any work in the affected road access. No work shall take place until the Contracting Officer approves the plan. The Contractor shall notify the Contracting Officer, at a minimum of the one-week in advance, prior to any disruption in parking or traffic flow.

00800.6 UTILITY VERIFICATION. The RFP drawings depict the general layout of all known utilities. The utility lines are presented for informational purposes only and shall be field verified by the

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

Contractor prior to the start of any utility excavation work. The Contractor shall locate and determine elevations of all existing utilities that will be encountered during work and shall protect all such utilities from any possible damage during the progress of work. The Contractor shall excavate by hand, in the vicinity of existing lines and operations. If damage should occur due to the Contractor's operations, repairs shall be made by qualified personnel at the Contractor's expense.

00800.7 ARTIFACTS, PRESERVATION & PROTECTION OF HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES.

a. Any and all items of prehistoric, historic and military relics or memorabilia, which may be discovered in the course of the construction activities, shall remain the property of the Government. Examples of such items include but are not limited to: printed matter or other papers, buttons, buckles, or fragments of uniforms, buried weapons, bayonets, sabers, cannon balls, ammunition, fragments of structures or foundations, in short any item of historical or archaeological value. Federal legislation provides for the protection, preservation and collection of scientific, prehistorical, historical and archaeological data, including relics and specimens, which might otherwise be lost due to alteration of terrain or building features as a result of any federal construction project. Any person who, without permission, injures, destroys, excavates, appropriates or removes any historical or prehistorical artifact, object of antiquity or archaeological resource from public lands of the United States is subject to arrest and penalty of law.

b. Cultural resources on Federal property are protected and managed by the Archaeological Resources Protection Act of 1979 and other applicable laws. The Contractor shall exercise care so as not to disturb or damage artifacts or fossils (should any be uncovered) during the excavation operations. Should the Contractor or any parties operating or associated with the performance of this contract discover evidence of possible scientific, prehistoric, historic or archaeological finds within the work limit lines or adjacent to work area shall immediately cease work at that location and notify the Contracting Officer. The Contractor shall provide the Contracting Officer with all information as to the specific location and nature of the findings. The Contractor shall cooperate fully with the Contracting Officer, except that all notifications by the Contractor shall be to the Contracting Officer and that all directions to the Contractor will be from the Contracting Officer. Where appropriate by reason of discovery, the Contracting Officer may order delays in time of performance or changes in the work or both. If such delays or changes are ordered, an equitable adjustment will be made in the contract in accordance with the applicable clauses of the contract.

00800.8 CONNECTION WITH WORK OF OTHER CONTRACTS. During the period of this contract, other contracts may be in force for the construction of other features of work on or adjacent to the site of work being accomplished under this contract. The Contractor shall arrange his plant and shall schedule and perform the work as to effectively cooperate with all other contractors and Government agencies. It is the Contractor's responsibility to know the extent of the limits of his contract. No direct or extra compensation will be allowed on account the cooperation required.

a. At all points of connection with work of other contracts, the Contract shall coordinate, as required, with the adjoining contracting to insure proper and timely connections.

b. Where the work under this contract is completed before that of the adjoining contractor, the Contractor shall terminate his work in an approved manner ready for future connection by the adjoining contractor. Pipes and conduits shall be closed with suitable caps or plugs that will prevent entry of dirt or debris, but that are readily removable when final connections are made. For underground lines that are back-filled, approved type markers that extend above the ground surface shall be provided to facilitate future location of the lines by the adjoining contract.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

c. Where the work of the adjoining contractor is already in place, the Contractor shall perform all work required to effect the necessary connection, including locations of underground lines, removing of caps, providing necessary adapters or joining pieces, and all related incidental work for necessary for a proper, secure connection.

00800.9 MAINTENANCE OF ACCESS ROADS.

a. The Contractor shall be responsible for the maintenance of access roads at the construction site. Maintenance of access roads shall include snow removal. The Contractor shall remove snow piles and rows when they affect safety, hamper emergency and fire vehicles, or block proper drainage.

b. The Contractor shall provide and allow full access to the project site to all traffic, except as noted, to other contractors and authorized personnel as designated by the Contracting Officer.

c. The Contractor shall not inflict damage upon land properties, roads outside the authorized construction areas by unwarranted entry upon, driving over curbs, passage through, damage to or disposal of, material on such land or property, or overloading of roads. The Contractor may make a separate agreement with any other party, regarding the use of, or right to, land or facilities outside the Installation. If such an agreement is made, it shall be in writing and a copy shall be furnished to the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents free from liability of any nature or kind arising from any trespassing or damage occasioned by Contractor operations.

00800.10 SITE AND BUILDING SECURITY.

a. The Contractor shall be responsible for the security of the areas within the contract limits. When the Government takes possession of certain areas, the Contractor shall be responsible for the areas remaining under Contractor control.

b. The Contractor shall be responsible for furnishing an identification required by Fort Drum to each employee in accordance with paragraph titled IDENTIFICATION OF EMPLOYEES. The Contractor shall provide an updated list of all employees working on the site. This list shall be provided on a monthly basis or when requested by the Contracting Office throughout the duration of this contract.

00800.11 DIGGING PERMIT. The Contractor shall be responsible for obtaining a digging permit prior to commencing any excavation. No excavation whether minor or major including trenching, sidewalk replacement, etc. will be permitted without an approved digging permit. Contractor shall carefully avoid contact or damage with any known or identified underground utilities. Work on or near roadways shall be flagged in accordance with the safety requirements in Safety and Health Requirements Manual EM 385-1-1, which forms a part of these specifications. Work located along the alert force route shall not cause blockage, and the Contractor shall maintain unobstructed access for alert force traffic at all times. Contractor shall apply for renewal of work permits as required if the work continues beyond the original permit expiration date.

00800.12 CONNECTION WITH WORK OF OTHER CONTRACTS. During the period of this contract, other contracts may be in force for the construction of other features of work on or adjacent to the site of work being accomplished under this contract. The Contractor shall arrange his plant and shall schedule and perform the work as to effectively cooperate with all other contractors and Government agencies. It is the Contractor's responsibility to know the extent of the limits of his contract. No direct or extra compensation will be allowed on account the cooperation required.

a. At all points of connection with work of other contracts, the Contract shall coordinate, as required, with the adjoining contracting to insure proper and timely connections.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

b. Where the work under this contract is completed before that of the adjoining contractor, the Contractor shall terminate his work in an approved manner ready for future connection by the adjoining contractor. Pipes and conduits shall be closed with suitable caps or plugs that will prevent entry of dirt or debris, but that are readily removable when final connections are made. For underground lines that are back-filled, approved type markers that extend above the ground surface shall be provided to facilitate future location of the lines by the adjoining contract.

c. Where the work of the adjoining contractor is already in place, the Contractor shall perform all work required to effect the necessary connection, including locations of underground lines, removing of caps, providing necessary adapters or joining pieces, and all related incidental work for necessary for a proper, secure connection.

00800.13 WORKING CONDITIONS, WORKING HOURS, AND NON-WORKING DAYS.

a. Working Hours: Normal working hours shall be Monday - Friday, 0700 to 1700 hours. Differences to these working hours must be approved by the Contracting Officer.

b. Non-Working Days: During the course of this contract the Contractor shall not perform any physical work during the activities listed below. The dates provided are the "on or about" dates of the activities.

(1) All Government Holidays.

c. Working Conditions:

(1) Open trenches or road restrictions will not be permitted without the approval of the Contracting Officer.

(2) Access ways shall be fully usable.

(3) All cost for conformance with the above stated requirements shall be included with the lump sum contract amount and no claim for extra cost shall be considered.

00800.14 CLEANING UP (CONSTRUCTION DISPOSAL, HOUSEKEEPING AND FINAL CLEANUP).

a. All construction debris or other rubbish generated as a result of construction activities shall be disposed of, off the Installation, at the Contractor's expense. Clean soil and rock removed from the construction site will be allowed to be disposed of on Fort Drum as a means of rehabilitation for existing borrow pits. Scrap, debris or surplus construction materials shall not be buried or burned on the site or disposed of in the Installation sanitary disposal containers (dumpsters) but shall be loaded in the Contractor's dumpsters for disposal at a location other than the Fort Drum Installation. The Contractor must obtain all necessary permit/applications required for the disposal of debris for off site locations. The Contractor is responsible for obtaining all necessary permits required for the disposal of all construction debris, including proper disposal of Hazardous Materials.

b. All spillage and mud from the Contractor's trucks shall be removed promptly. All damages to existing curbing, roads, walks, trees, fencing, walls, landscaping and other Government Property resulting

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

from the Contractor's activity, shall be repaired promptly, as directed by the Contracting Officer, and at the Contractor's expense.

c. Project housekeeping shall be done on a daily basis. Areas requiring housekeeping include the Contractor's area, all staging areas provided to the Contractor and around all trailers. At the end of each day, the Contractor shall leave the housekeeping areas broom clean and free of rubbish, litter, and construction debris generated by that day's work. Any dirt or mud which is tracked onto paved or surfaced roadways, shall be cleaned away immediately and in no case shall the Contractor leave the site at the close of work without verifying that all dirt or mud has been removed from any paved surface beyond the limits of construction.

d. The Contractor shall provide and maintain a dumpster of sufficient size at the project site. The dumpster shall be replaced or emptied at regular intervals to avoid overfilling and spillage and the area around the dumpster shall be kept clean at all times.

e. If, at any time during the progress of the work, the Contracting Officer determines that the Contractor is failing to comply with the requirements of the subparagraphs above, the Contractor will be directed to take such measures, as deemed necessary to constitute corrective action. Such measures may include the requirement to increase the work force assigned to the housekeeping and cleanup operations or to work during evenings or weekends until proper job conditions have been restored.

00800.15 DUST AND NOISE CONTROL.

a. Dust Control: The Contractor shall maintain all excavation, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas and all other work areas within or outside of the project boundaries free from dust which would cause a hazard or nuisance to others. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods will be permitted to control dust. Sprinkling, to be approved, must be repeated at such intervals as to keep all parts of the disturbed area damp at all times, and the Contractor shall have sufficient competent equipment on the project site to accomplish this if sprinkling is used. Dust control shall be performed as the work proceeds and whenever dust nuisance or hazard occurs. No separate or direct payment will be made to the Contractor for dust control and the cost thereof shall be considered incidental to and included in the contract prices. The Contractor will control his operations to prevent any measurable or visible dust from migrating outside of the work area.

b. Noise Control: The Contractor shall schedule extremely noisy activities with the Contracting Officer. The activities shall be planned to minimize the impact on existing facilities and building occupants

00800.16 OPERATION AND MAINTENANCE MANUALS.

a. The Contractor shall provide 3 sets of operation and maintenance manuals to be used for training, operation and maintenance for each piece of operating equipment and material finishes. All material shall be clearly identified, including its location on the project. Sheets shall be 8 1/2" x 11", except pull out sheets which may be neatly folded to 8 1/2" x 11". Manuals shall be properly indexed, bound in plastic covered 3-ring, loose-leaf binders with the project title lettered on the front cover, and shall contain:

- (1) Name, address, phone number and trade of all subcontractors.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- (2) Complete maintenance instruction; name, address and phone number of installing contractor, manufacturer's local representative, for each piece of operating equipment.
- (3) Narrative consisting of instruction for equipment and systems to include:
 - (a) Description of system and intent.
 - (b) Start-up Procedures.
 - (c) Emergency Procedures.
 - (d) Shut-down Procedures.
 - (e) Maintenance Instructions.
 - (f) Wiring Diagrams and trouble shooting guidelines.
 - (g) System Layout Diagrams
- (4) Catalog data on plumbing fixtures, valves, water heaters, heating and cooling equipment, temperature controls, fans, electrical panels, and service entrance equipment, elevators and light fixtures.
- (5) Instructions for use in training and operation and maintenance of each item of operating equipment.
- (6) Manufacturer's name, type, color designation for ceramic tile, resilient floors, windows, doors, brick, concrete block, paint, roofing and other materials.

b. Submit 3 copies of maintenance manual to the Contracting Officer for the Installation's use prior to request for substantial completion.

c. Posted Operating Instructions: All major items of mechanical equipment shall have posted in a convenient and appropriate location operating instruction consisting of description of system operation, including necessary diagrams keyed to valve and piping identification systems. One set of instruction shall be 36" X 24" for posting on the wall. The instructions shall be laminated on both sides with clear plastic laminate. Two sets of laminated 8 1/2" X 11" instructions shall be provided with O&M manuals.

00800.17 PREPARATION OF DD FORM 1354 "TRANSFER OF ACCEPTANCE OF MILITARY REAL PROPERTY". At the conclusion of this contract, the Contractor shall compile and furnish to the Contracting Officer all costs and quantity data of materials and systems furnished and installed. A list of items for which the costs and quantity data is required and blank DD Form 1354 will be furnished to the Contractor by the Government. The Contractor shall return this information on a completed DD Form 1354 to the Contracting Officer within 10 days from receipt of the list. The following statements shall also be provided at the same time as the completed DD Form 1354:

a. No Asbestos Statement: Upon completion of the work, the Contractor and all of his subcontractors shall provide a written statement stating that "No Asbestos-Containing" material/products were used in the construction.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

b. No Polychlorinated Biphenyl (PCB) Statement: Upon completion of the work, the Contractor and all of his subcontractors shall provide a written statement stating that "No Polychlorinated Biphenyl (PCB)" material/products were used in the construction.

c. No Lead Statement: Upon completion of the work, the Contractor and all of his subcontractors shall provide a written statement stating that "No Lead" material/products were used in the construction.

d. If there are exceptions to the above statements, the contractor shall identify every location, the material, and provide an assessment of the hazard(s) to humans.

e. The Contractor shall submit all project closeout documents not previously provided to the Contracting Officer at the time of the Beneficial Occupancy Inspection.

00800.18 COORDINATION OF TRADES.

a. The contract drawings are in part diagrammatic and show the general arrangement of duct, piping and other mechanical and electrical trades. The Contractor must have a competent engineer on the project site to coordinate all fieldwork and shop drawings of the various trades prior to installation and/or submission of field or shop drawings for approval. The Contractor shall allot spaces to the various trades prior to installation of the work. In spaces where all the various installations cannot be accommodated, the Contractor shall notify the Contracting Officer and shall submit alternate solutions as to its solution at no cost to the Government. The decision of the Contracting Officer shall be final.

b. The Contractor shall be responsible for the coordinated drawings of the various trades showing locations and sizes of all sleeves, electric outlets, inserts, piping, shafts, hangers, lights, ducts, catwalks, pads, chases, sprinklers, smoke detectors, soffits, fascias, steel trusses, etc. Composite signed-off coordinated shop drawings shall be developed at 3/8" equals 1'-0 scale showing all mechanical-electrical work in hung ceilings and chases.

00800.19 PEST CONTROL.

a. The Contractor shall deposit all food refuge in sealed trash containers to restrict food source for rodents.

b. The Contractor shall replace construction dumpsters at least every two weeks to prevent rodent harborage.

c. All materials, trailers, and storage sheds in staging and construction areas shall be elevated and stored a minimum of 3 feet from any structure or fixed object.

d. The Contractor shall cap all pipes at the end of each day to prevent pest infiltration.

00800.20 COORDINATION MEETINGS.

a. Weekly coordination meetings shall be conducted by the Contracting Officer representative with the Contractor and Fort Drum personnel to review and coordinate the construction schedule. The Contractor shall provide typed minutes of each meeting within 3 days of meeting.

b. The Contractor shall submit at each meeting, for approval by the Contracting Officer a "2-week construction look ahead" construction plan indicating the type and extent of construction to be performed. The plan shall be submitted 14 calendar days prior to actual construction.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

00800.21 CONTINUITY OF QUALITY PERFORMANCE. The Contractor agrees that in the event of any staffing or corporate changes, or substitution of subcontractors and/or consultants, during the performance of this contract the employees, subcontractors, or consultants engaged in the performance of the contract will continue to have the qualifications, professional background, education, and experience equal to that proposed by the Contractor and accepted by the Government for contract award. Any changes in key management personnel shall be submitted for approval by the Contracting Officer.

00800.22 DISPENSARY AND HOSPITAL FACILITIES. The facilities of the Fort Drum Post clinic are available to use by the Contractor only for the emergency treatment of his personnel injured at the job site. Charges to the Contractor for the use of said facilities will be at prevailing rates for the services provided and billing and payment will be made by separate transaction between the clinic and the Contractor.

00800.23 CONTRACTOR WARRANTY MANAGEMENT.

1. References:

- Clause "Warranty of Construction", (FAR 52.246-0021)
- Clause "Inspection of Construction", (FAR 52.246-12)
- Specification Section 00800 Entitled "Special Contract Requirements" paragraph entitled "Record Drawings"
- Specification Section 01451 entitled "Contractor Quality Control Design/Build Construction"

2. General: Warranty of Construction. Per ref 1.a all construction shall be warranted against defects for a one-year period beginning at the project acceptance point. In addition, there may equipment, systems or items for which labor and/or materials are warranted beyond the one year point. These are extended warranty items. In order to insure that the Government systematically receives all warranties of construction, equipment and systems to which it is entitled, the contractor shall execute all actions as required by above references and as contained herein. The contractor shall not be permitted to claim improper and/or lack of maintenance as a reason to abdicate its responsibility to correct a warranty or latent defect items if the contractor is not in contract compliance pursuant to submission of O&M Manuals and /or maintenance instructions as required by references indicated in paragraph 4. or elsewhere in this contract.

3. Post-Completion Inspections: For purposes of management of construction warranties, the Government conducts four and nine month post construction warranty inspections with using agencies. The Contractor is encouraged to attend these inspections in order to better manage any warranty items for which it may be responsible.

4. Tagging of Extended Warranty Items: The Contractor shall install tags to identify items protected by extended warranty. The tags shall be minimum 3 inches by 5 inches in size, machine-printed in minimum 14-point type, and shall be weatherproof and oil resistant. Tags shall be attached to equipment if accessible or to accessible control panel, etc. As a minimum, tags shall indicate the following information:

"Extended Warranty Item:"

Name of Item

Name of System with which associated, number designation within system, or other identifier

Model Number

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

Serial Number
Start and end Dates of Warranty
Contract number
Contract Name
Contractor Name
Warranty Point of Contact name, organization and telephone number.
Warranty response time priority code

“WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.”

Contractor shall install additional tags on all equipment and systems where required for reasons of safety, maintenance, and prevention of damage.

5. Posting of Instructions: In addition to any posting of operating procedures as may be required elsewhere in this contract, any equipment or system for which proper operation or maintenance is critical in order to preserve warranties, prevent damage, or for reasons of safety shall have proper operating procedures posted near the equipment or near the operating point. The summarized schedule of Maintenance Instructions shall be inclusive and specific regarding all system components, indicate frequency of maintenance for each maintenance item, and briefly describe each maintenance procedure and cross-reference the volume and page number of the O&M Manual that details the maintenance procedure. Training shall include review of the Summarized Schedule of Maintenance. Instructions shall be protected by 1/16-inch thick plastic sheet. As a minimum such equipment or system shall include:

Electrical Substations
Transformers
Major HVAC System components including chillers, air-handlers, fans, etc.
HVAC Control Panel
Boilers

6. Warranty Plan. Within 10 days of the 80% completion point of this contract (or deliverable phase thereof), the contractor shall submit a warranty plan for Government approval per section “Submittals”. The Warranty Plan shall include all required actions and documents to assure that the Government receives all warranties to which it is entitled. The plan shall be in narrative form and contain sufficient detail to render it suitable for use by future maintenance and repair personnel, whether tradesmen, or of engineering background, not necessarily familiar with this contract. The plan shall be signed by a principal of the contractor. All documents in the plan shall be assembled in a binder. Upon acceptance it shall be signed by a Government Representative. The term “status” as indicated below shall include due date and whether item has been submitted or was accomplished. As a minimum the plan shall indicate:

a. Roles and responsibilities of all personnel associated with the warranty process, including points of contact and telephone numbers within the organizations of the contractor’s, subcontractors or suppliers involved. This shall cover both the one year warranty of construction and extended warranty items or systems.

b. Listing and status of O&M manuals and As-built drawings, and expected delivery dates.

c. Listing and status of all training to be provided to Government personnel, whether specified by contract or required by manufacturers. Indicate dates of training both planned and accomplished.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

d. Listing and status of delivery of all Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc.

e. A spreadsheet-type list for each warranted equipment, item, feature of construction or system, to include roofs, HVAC components, pumps, motors, transformers, and for all commissioned systems such as fire protection and alarm systems, sprinkler systems, lightning protection systems, etc., as applicable. For each item, the list shall indicate the following information:

Name of item

Model and serial numbers.

Location where installed

Names of manufacturers or, suppliers and phone numbers.

Names addresses and telephone numbers of sources of spare parts

Identification of Warranted materials and labor, and other terms of warranty.

Cross-reference to warranty certificates as applicable.

Starting point and duration of warranty period.

Summary of maintenance procedures required to continue the warranty in force.

Cross-reference to specific pertinent Operation and Maintenance manuals

Organization, names and phone numbers of persons to call for warranty service

Typical response time and repair time expected for various warranted equipment

f. The contractor's acknowledgement of intention to attend the Four and Nine month post-construction warranty inspections conducted by the Government.

g. Status of tagging of all equipment covered by extended warranties.

h. Copies of instructions to be posted near selected pieces of equipment where operation is critical for warranty and/or safety reasons

i. Contractor's understandings with respect to warranty responsibilities for the one year overall warranty of construction, and expected performance on warranty calls during this period.

7. Warranty Meeting. Within 10 days after the approval of the Warranty Plan the contractor will notify the Government representative for the purpose of scheduling a meeting to clarify understandings of responsibilities with respect to warranties to which the Government is entitled. The Government and contractor shall attend the warranty meeting, as well as any subcontractors, or suppliers involved in the warranty process. The Warranty Plan shall be the basis of the meeting's agenda. Contractor will prepare minutes of the meeting indicating major understandings reached, and submit for Government approval within 3 days of the meeting. Minutes will be signed by authorized representatives of the Contractor and Government.

8. Warranty Requirements Compliance. Expected performance of the Contractor on warranty work is indicated herein. If Contractor performance on a warranty call is unsatisfactory, the Contracting Officer may authorize the use of funds remaining in the contract to accomplish the warranty work on an expedited basis including the cost of Government administrative expenses. Repeated poor performance may result in retaining any payment due the Contractor until after the warranty of construction period. The Contractor's Performance Bond shall remain effective through the contract-specified warranty period. Poor warranty performance may also result in a poor contractor performance rating being entered into the Government CCASS system, or downward revision of such rating if already entered.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

9. Warranty Performance – Expected Response to Construction Warranty Service Requests and Completion of Repairs: Following oral or written notification by the Contracting Officer, the Contractor shall respond to construction warranty service requirements in accordance with the "Construction Warranty Service Priority List" and the three categories of priorities listed below. The Contractor shall submit a report on any warranty item that has been repaired during the warranty period. The report shall include the cause of the problem, date reported, corrective action taken, and when the repair was completed.

a. First Priority Code 1. Perform onsite inspection to evaluate situation, and determine course of action within 4 hours, initiate work within 6 hours and work continuously to completion or relief.

b. Second Priority Code 2. Perform onsite inspection to evaluate situation, and determine course of action within 8 hours, initiate work within 24 hours and work continuously to completion or relief.

c. Third Priority Code 3. All other work to be initiated within 3 work days and work continuously to completion or relief.

d. The "Construction Warranty Service Priority List" is as follows:

Code 1-Air Conditioning Systems

- (1) Recreational support.
- (2) Air conditioning leak in part of building, if causing damage.
- (3) Air conditioning system not cooling properly.

Code 1-Doors

- (1) Overhead doors not operational, causing a security, fire, or safety problem.
- (2) Interior, exterior personnel doors or hardware, not functioning properly, causing a security, fire, or safety problem.

Code 3-Doors

- (1) Overhead doors not operational.
- (2) Interior/exterior personnel doors or hardware not functioning properly.

Code 1-Electrical

- (1) Power failure (entire area or any building operational after 1600 hours).
- (2) Security lights
- (3) Smoke detectors

Code 2-Electrical

- (1) Power failure (no power to a room or part of building).
- (2) Receptacle and lights (in a room or part of building).

Code 3-Electrical

Street lights.

Code 1-Gas

- (1) Leaks and breaks.
- (2) No gas to family housing unit or cantonment area.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

Code 1-Heat

- (1). Area power failure affecting heat.
- (2). Heater in unit not working.

Code 2-Kitchen Equipment

- (1) Dishwasher not operating properly.
- (2) All other equipment hampering preparation of a meal.

Code 1-Plumbing

- (1) Hot water heater failure.
- (2) Leaking water supply pipes.

Code 2-Plumbing

- (1) Flush valves not operating properly.
- (2) Fixture drain, supply line to commode, or any water pipe leaking.
- (3) Commode leaking at base.

Code 3 -Plumbing

Leaky faucets.

Code 3-Interior

- (1) Floors damaged.
- (2) Paint chipping or peeling.
- (3) Casework.

Code 1-Roof Leaks

Temporary repairs will be made where major damage to property is occurring.

Code 2-Roof Leaks

Where major damage to property is not occurring, check for location of leak during rain and complete repairs on a Code 2 basis.

Code 2-Water (Exterior)

No water to facility.

Code 2-Water (Hot)

No hot water in portion of building listed.

Code 3-All other work not listed above.

10. Post-Completion Inspections: The Government conducts project inspections for purposes identifying warranted deficiencies at the four and nine month points after project acceptance. The Contractor is required to attend these inspections in order to better manage any warranty items for which it may be responsible.

00800.24 CLAIMS PROCESSING PROCEDURES. The following shall be submitted to the Contracting Officer at the following address: US Army Corps of Engineers, New York District, 26 Federal Plaza, Room 1843, NY, NY 10278-0090:

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- a. Claims referencing or mentioning the Contracts Disputes Act of 1978.
- b. Request for a written decision by the Contracting Officer.
- c. Claims certified in accordance with the Contract Disputes Act of 1978.

No other Government representative is authorized to accept such a request. A copy shall also be provided to the authorized Contracting Officer's Representative. The Contractor shall also provide the Contracting Officer with a copy of requests for additional time, money, or interpretation of contract requirements which were provided to the authorized representative of the Contracting Officer that have not been resolved after 90 days.

00800.25 CONTRACT DRAWINGS, MAPS AND SPECIFICATIONS.

a. The Government under this contract, will provide the contractor, without charge, five (5) sets of Request for Proposal (RFP) packages except publications incorporated into the technical provisions by reference.

b. The contractor shall:

- (1) Check all drawings furnished immediately upon receipt;
- (2) Complete all drawings and verify the figures before laying out the work;
- (3) Promptly notify the Contracting Officer of any discrepancies;
- (4) Be responsible for any errors that might have been avoided by complying with this paragraph (b);
and
- (5) Reproduce and print contract drawings and specifications as needed.

c. In general:

- (1) Large-scale drawings shall govern small-scale drawings; and
- (2) The contractor shall follow figures marked on drawings in preference to scale measurements.

d. Omissions from the drawings of specifications or the mis-description of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the contractor from performing such omitted or mis-described details of the work. The contractor shall perform such details as if fully and correctly set forth and described on the drawings and specifications.

**PROJECT IDENTIFICATION SIGN
MILITARY PROJECT**

The graphic format for this 4' x 6' sign panel follows the legend guidelines and layout as specified below. The large 4' x 4' section of the panel in the right is to be white with black legend. The 2' x 4' section of the sign on the left with the full corps Signature (reverse version) is to be screen printed Communications Red on the white background. The castle insignia will be furnished by the Government in pressure sensitive vinyl for affixing by the Contractor. See attached sheet for fabrication and mounting guidelines.

Legend Group 1: One- to two-line description of Corps relationship to project
Color: White
Typeface: 1.25" Helvetica Regular
Maximum line length: 19"

Legend Group 2: Division or District Name (optional). Place below 10.5" Reverse Signature (6" Castle)
Color: White
Typeface: 1.25" Helvetica Regular

Legend Group 3: One- to three-line project title legend describes the work being done under this contract.
Color: Black
Typeface: 3" Helvetica Bold
Maximum line length: 42"

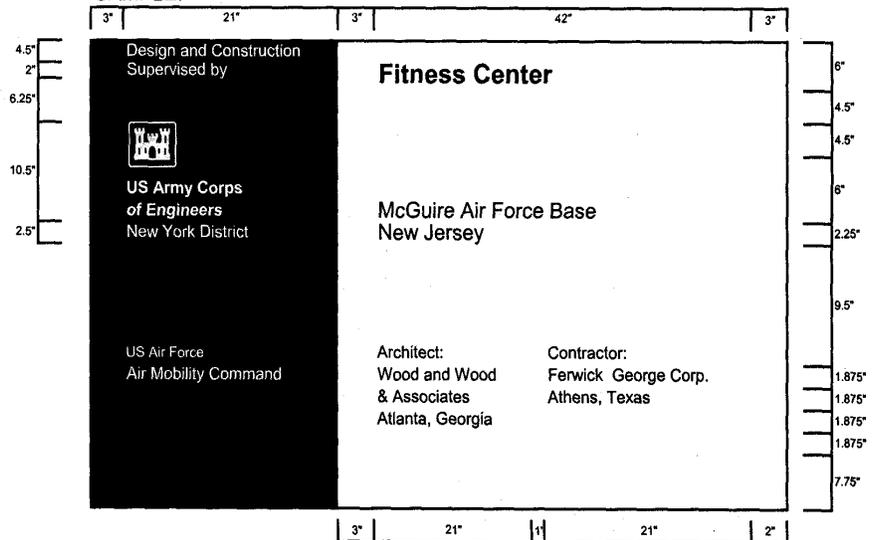
Legend Group 4: One-to two-line identification of project or facility (civil works) or name of sponsoring department (military).
Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Cross-align the first of Legend Group 4 with the first line of the Corps Signature (US Army Corps) as shown.

Legend Group 5a-b: One-to-five line identification of prime contractors including: type (architect, general contractor, etc.), corporate or firm name, city, state. Use of Legend Group 5 is optional.
Color: Black
Typeface: 1.25" Helvetica Regular
Maximum line length: 21"

All typography is flush left and rag right upper and lower case with initial capitals only as shown. Letter and word spacing to follow Corps standards as specified in * Appendix D

SAMPLE:



(Dimensions are in inches)

Sign Type	Legend	Panel Size	Post Size	Specification Code	Mounting Height	Color Bkg/Lgd
CID-01	various	4' x 6'	4' x 4'	HDO-3	48"	WH-RD/BK

* Refers to the U.S. Army Corps of Engineers, "Sign Standards Manual", EPS-310-1-6.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

SAFETY PERFORMANCE SIGN

The graphic format, color, size and type-faces used on the sign are to be reproduced exactly as specified below. The title with First Aid logo in the top section of the sign, and the performance record captions are standard for all signs of this type. Legend Group 2 and 3 below identify the project and the contractor and are to be placed on the sign as shown. Safety record numbers are mounted on individual metal plates and are screw-mounted to the background to allow for daily revisions to posted safety performance record.

Legend Group 1: Standard two-line title "safety is a Job Requirement", with (8" od.) Safety Green First Aid logo. Color: To match PMS 347
Typeface: 3" Helvetica Bold
Color: Black

Legend Group 2: One- to two-line project title legend describes the work being done under this contract and name of host project. Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

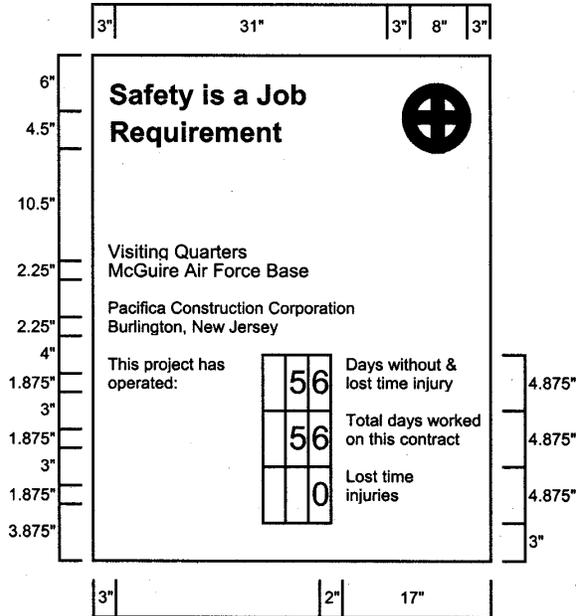
Legend Group 3: One - to two-line identification: name of prime contractor and city, state address. Color: Black
Typeface: 1.5" Helvetica Regular
Maximum line length: 42"

Legend Group 4: Standard safety record captions as shown. Color: Black

Typeface: 1.25" Helvetica Regular

Replaceable numbers are to be mounted on white .060 aluminum plates and screw-mounted to background. Color: Black
Typeface: 3" Helvetica Regular
Plate size: 2.5"x.5"

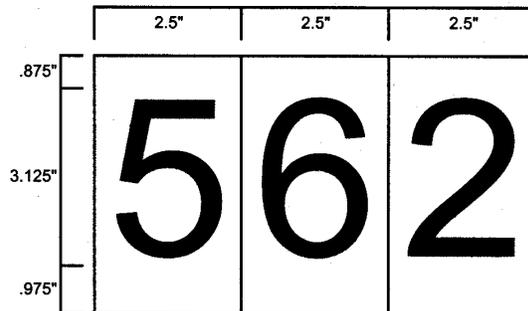
All typography is flush left and rag right, upper and lower case with initial capitals only as shown. Letter- and word-spacing to follow Corps standards as specified in Appendix D. *



Dimensions inches.
See attached sheet for fabrication and mounting guidelines.

* Refer to the U.S. Army Corps of Engineers, "Sign Standards Manual", EPS-310-1-6.

Sign Type	Legend Size	Panel Size	Post Size	Specifications Code	Mounting Height	Color Bkg/Lgd
CID-02	various	4"x4"	4"x4"	HDO-3	48"	WH/BK-GR



Fabrication and Mounting Guidelines

As Construction Project Identification signs and Safety Performance signs are to be fabricated and installed as described below. The signs are to be erected at a location designated by the contracting officer and shall conform to the size, format, and typographic standards shown on the attached sheets.

The sign panels are to be fabricated from .75" High Density Overlay Plywood. Panel preparation to follow HDD specifications provided in Appendix B. **

Sign graphics to be prepared on a white non-reflective vinyl film with positionable adhesive backing.

All graphics except for the Communications Red background with Corps signature on the project sign are to be die-cut or computer-cut non-reflective vinyl, pre-spaced legends prepared in the sizes and typefaces specified and applied to the background panel following the graphic formats shown on the attached sheets.

The 2'x4' Communications Red panel (to match PMS-032) with full Corps signature (reverse version) is to be screen printed on the white background. Identification of the District or Division may be applied under the signature with white cut vinyl letters prepared to Corps standards. Large scale reproduction artwork for the signature is provided on page 4.8 (photographically enlarge from 6.875" to 10.5").**

Drill and insert six (6) .375" T-nuts from the front face of the HDD sign panel. Position holes as shown. Flange of T-nut to be flush with sign face.

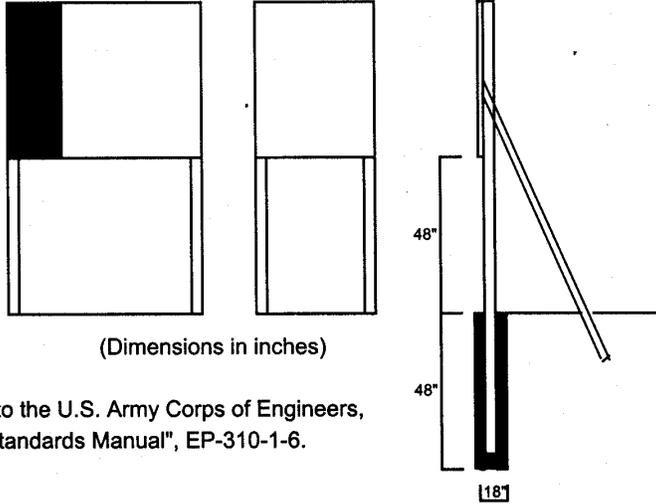
Apply graphic panel to prepared HDD plywood panel following manufacturers' instructions.

Sign uprights to be structural grade 4"x4" treated Douglas Fir or Southern Yellow Pine. No. 1 or better. Post to be 12" long. Drill six (6) .375" mounting holes in uprights to align with T-nuts in sign panel. Countersink (.5") back of hole to accept socket head cap screw (4"x.375").

Assemble sign panel and uprights. Imbed assembled sign panel and uprights in 4" hole. Local soil conditions and/or wind loading may require bolting additional 2"x4" struts on inside face of uprights to reinforce installation as shown.

Detailed specifications for HDD plywood panel preparation are provided in Appendix B.**

Shown below the mounting diagram is a panel layout grid with spaces provided for project information. Photocopy this page and use as a worksheet when preparing sign legend orders.



(Dimensions in inches)

** Refers to the U.S. Army Corps of Engineers, "Sign Standards Manual", EP-310-1-6.

Construction Project Sign
Legend Group 1: Corps Relationship

1. []
2. []

Legend Group 2: Division/District Name

1. []
2. []

Legend Group 3: Project Title

1. []
2. []
3. []

Legend Group 4: Facility Name

1. []
2. []

Legend Group 5a: Contractor/A&E

1. []
2. []
3. []
4. []
5. []

Legend Group 5b: Contractor /A&E

1. []
2. []
3. []
4. []
5. []

Safety Performance Sign

Legend Group 1: Project Title

1. []
2. []

Legend Group 2: Contractor/A&E

1. []
2. []

- - End of Section - -

FORT DRUM EXCAVATION PERMIT

(Required for any excavations within Fort Drum boundaries)

CONTRACT or WORK ORDER NO. _____

CONTRACTOR/EXCAVATING AGENCY _____

PROJECT DESCRIPTION/TITLE _____

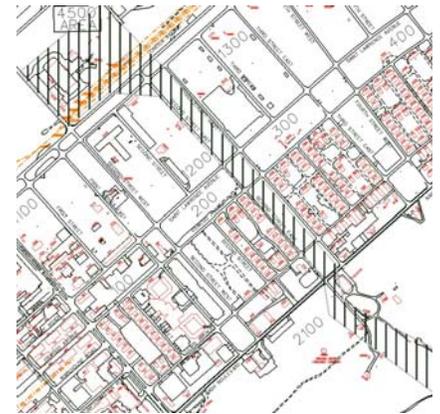
LOCATION OF EXCAVATION _____

(Attach sketches or project drawings for reference.)

INSTRUCTIONS: Personally contact each office below to coordinate identification of underground utilities. Identify the exact location of excavation and ensure work area is laid out on the ground prior to calling for verification of utility information. Provide information on the type of work, means of excavation, and have construction drawings available for review. Assist by pre-marking known utilities. After identification or verification, ensure all on-site construction drawings are updated accordingly, especially for use by sub-contractors. Project Foreman or Superintendent will be on-site during the identification of utilities to ensure first-hand knowledge, assist in locating utilities and identifying work areas. Once required signatures are obtained and utilities located, return to issuer (Government Project Manager/COR) for final approval. A copy of the completed Excavation Permit will be maintained on-site at all times. Ensure markings are maintained throughout the excavation period. Changes to or enlargement of the original work area require a new Excavation Permit.

The undersigned have ensured existing underground utilities and other appurtenances have been identified prior to excavation. Contractors shall repair any damage to identified/located utilities and other appurtenances at no cost to the Government. Special instructions to Excavators will be annotated in writing on the back of the form and adhered to by the Contractor/Excavating agency.

<u>SIGNATURE</u>	<u>DATE</u>	<u>OFFICE</u>
_____	_____	PW Master Planner, Engineering Division (772-6117) 4895 Nininger Street
_____	_____	PW Environmental Division (772-5708) 4839 Delahanty Ave. Petroleum_____ and Water Quality_____ 4838 Delahanty Ave. Wetlands_____ and NEPA Coordinator_____ 4848 Delahanty Ave.
_____	_____	PW Cultural Resources Section (772-4165) 4836 Delahanty Ave.
_____	_____	PW Plumbing (Water, Sewer, HTW & Gas) (772-5574) 4004 First Street West
_____	_____	PW HVAC Shop (772-2346) 4004 First Street West
_____	_____	PW Electric Shop (772-4888) 4004 First Street West
_____	_____	Communications (IT) (772-5205) 10690 South Memorial Dr.
_____	_____	Power Plant (773-2314) 4515 2 nd St W (Excavations in or near hatched area on map)
_____	_____	UFPO (1-800-962-7962) (Commercial Phone & Cable TV)
_____	_____	Fort Drum Fire Dept. (772-4702) (Dial 911 for Emergencies) 801 Nash Blvd. (For Excavations involving USTs or Traffic Interference)
_____	_____	US Army Corps of Engineers (772-4106) 4884 Jones St. (For Excavations on MCA project sites)



All signature dates shall be within 30 days of the excavation.

CONTRACTOR/EXCAVATING AGENCY OFFICIAL CERTIFIES THE ABOVE REQUIREMENTS HAVE BEEN COMPLIED WITH:

Signature, Typed or Printed Name, and Date

DATE ISSUED:

ISSUED BY:

Signature and Typed or Printed Name

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

TABLE OF CONTENTS

SECTION 01012

DESIGN AFTER AWARD

- 1.0 GENERAL
- 2.0 DESIGNER OF RECORD
- 3.0 DESIGN CONFERENCES
- 4.0 STAGES OF DESIGN SUBMITTALS
- 5.0 QUANTITY OF DESIGN SUBMITTALS
- 6.0 MAILING OF DESIGN SUBMITTALS
- 7.0 COORDINATION
- 8.0 GOVERNMENT REVIEW COMMENTS
- 9.0 DESIGN ANALYSIS
- 10.0 DRAWINGS
- 11.0 SPECIFICATIONS
- 12.0 SURVEYING AND MAPPING
- 13.0 CONTENTS OF DESIGN SUBMITTALS
- 14.0 DD FORM 1354 "TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY"
- 15.0 RESIDENT MANAGEMENT SYSTEMS (RMS)
- 16.0 DESIGN REVIEW COMMENT SUBMISSION

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

SECTION 01012

DESIGN AFTER AWARD

1.0 GENERAL

1.1 Compliance and Certification

Contractor shall certify that all items submitted in the design documents (after contract award) comply with all the stated RFP requirements. The criteria specified in this RFP are binding contract criteria. In case of any conflict between the RFP criteria and Contractor's submittals, the RFP criteria will govern unless there is a written and signed agreement between Contracting Officer and Contractor waiving a specific requirement.

1.2 Key Personnel, Subcontractors and Outside Associates or Consultants

In connection with the services covered by this contract, any in-house personnel, subcontractors, and outside associates or consultants will be limited to individuals or firms that were specifically identified and agreed to during proposal evaluation and if required during negotiations. The contractor shall obtain the Contracting Officers written consent before making any substitution for these designated in-house personnel, subcontractors, associates, or consultants.

- a. Substitution of key personnel will not be permitted unless approved in writing by the Contracting Officer/Source Selection Authority and then issued as an administrative modification to the contract to incorporate the change. The authority for substitution of key personnel lies solely with the Contracting Officer and will not be delegated to the ACO or COR.

1.3 Responsibility of the Contractor for Design

- a. The Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all designs, drawings, specifications, and any other non-construction services furnished under this contract. The Contractor shall, without additional compensation, correct or revise any errors or deficiency in its designs, drawings, specifications, and other non-construction services.
- b. Neither the Government's review, approval or acceptance of, nor payment for, the services required under this contract shall be construed to operate as a waiver of any rights under this contract or of any cause of action arising out of the performance of this contract, and the Contractor shall be and remain liable to the Government in accordance with applicable law for all damages to the Government caused by the Contractor's negligent performance of any of the services described in paragraph (a) furnished under this contract.
- c. The rights and remedies of the Government provided for under this contract are in addition to any other rights and remedies provided by law.
- d. Independent Technical Review (ITR) shall be performed as follows, all design submissions are reviewed by a qualified team, not affiliated with the development of a project/product, for the purpose of confirming the proper application of clearly

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

established criteria, regulations, laws, codes, principles and professional procedures. It includes the verification of assumptions, methods, and level of complexity of the analysis. It also verifies the alternatives evaluated, appropriateness of data used, reasonableness of the results and functionality of the product relative to the customer's requirements.

1.4 Sequence of Design-Construction

- a. After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. No construction may be started, until the Government reviews the Final Design submission and determines it satisfactory for purposes of beginning construction. The ACO or COR will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the ACO or COR, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.
- b. If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.
- c. At Contractor's option, the design for site work, foundation work (including structural load calculations) and/or utilities may be submitted as a package separate from the remaining facilities. This separate design package can be submitted on a faster schedule to allow for an early start to construction of this work. Only 95% and 100% design submissions are required for this package when submitted separately for this option. This work shall meet all review requirements and all other contract requirements.

1.5 Contractor's Role During Process

The Contractor's construction management key personnel shall be actively involved during the design process to effectively integrate the design and construction requirements of this contract. In addition to the typical required construction activities, the Contractor's involvement includes, but is not limited to actions such as: integrating the design schedule into the Master Schedule to maximize the effectiveness of fast-tracking design and construction (within the limits allowed in the contract), ensuring constructability and economy of the design, integrating the shop drawing and installation drawing process into the design, executing the material and equipment acquisition programs to meet critical schedules, effectively interfacing the construction QC program with the design QC program, and maintaining and providing the design team with accurate, up-to-date redline and as-built documentation. The Contractor shall require and manage the active involvement of key trade subcontractors in the above activities.

1.6 Contract Drawings, Maps, and Specifications

- a. The Government under this contract, will provide the Contractor, without charge, five (5) sets of Request for Proposal (RFP) packages except publications incorporated into the technical provisions by reference.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

1.7 Design-Build Contract - Order of Precedence

Section "Project Design Requirements" is intended to identify specific project requirements. In cases of criteria conflict, Section "Project Design Requirements" holds precedence over all other criteria mentioned or referenced.

- a. The contract includes the standard contract clauses and schedules current at the time of contract award. It entails (1) the solicitation in its entirety, including all drawings, cuts, and illustrations, and any amendments, and (2) the successful offeror's accepted proposal. The contract constitutes and defines the entire agreement between the Contractor and the Government. No documentation shall be omitted which in any way bears upon the terms of that agreement.
- b. In the event of conflict or inconsistency between any of the provisions of this contract, precedence shall be given in the following order:
 - (1) Betterments: Any portions of the accepted proposal which both conform to and exceed the provisions of the solicitation.
 - (2) The provisions of the solicitation.
 - (3) All other provisions of the accepted proposal.
 - (4) Any design products including, but not limited to, plans, specifications, engineering studies and analyses, shop drawings, equipment installation drawings, etc.. These are "deliverables" under the contract and are not part of the contract itself. Design products must conform with all provisions of the contract, in order of precedence herein.

1.7.1 Field Verification

The Contractor shall verify field conditions which are required for final design. The information shall be reflected in the design documents.

1.7.2 Topographical Information

Government has supplied available topographic and existing utility information for the project. Any additional topographic and existing utility information required for design after award of the contract shall be provided by Contractor.

2.0 DESIGNER OF RECORD

The Contractor shall identify the Designer of Record for each area of work. One Designer of Record may be responsible for more than one area. All areas of design disciplines shall be accounted for by a licensed Architect or Licensed Engineer of Record registered in New York State. All architects and engineers shall be licensed and possess current registration. The Designer(s) of Record shall stamp, sign, and date all design drawings under their responsible discipline at 100% design stage only. The Designer(s) of record shall have a current New York State PE registration. One of the Designers of Record may sign all drawings but only after the Designer of Record for each discipline has certified in writing

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

that their area of work has been reviewed and meets all contract requirements. Each written certification shall be submitted to the government with the final package.

3.0 DESIGN CONFERENCES PRE-WORK

As part of the Pre-work Conference conducted after contract award, key representatives of the Government and the Contractor will review the design submission and review procedures specified herein, discuss the preliminary design schedule and provisions for phase completion of the D/B documents with construction activities (fast tracking), as appropriate, meet with the Corps of Engineers Design Review personnel and key Using Agency points of contact and any other appropriate pre-design discussion items.

4.0 STAGES OF DESIGN SUBMITTALS

Design submittals are required at the intermediate (75%) design stage and at the pre-final (95%) design stage unless otherwise specified. The requirements of each design stage are listed hereinafter. The Contractor shall reflect the number and contents of the design submittals, to include review periods in the progress chart. The 75%, 95% and 100% complete design submittals shall be made in one package each.

At Contractor's option, the design for site work, foundation work and/or utilities may be submitted as a package separate from the remaining facilities. This design package can be submitted on a faster schedule to allow for an early start to construction of this work. Only 95% and 100% design submissions are required for this package when submitted separately for this option. This work shall meet all review requirements and all other contract requirements.

4.1 Review Submittal (75%)

The review of this submittal is primarily to insure that the contract documents are proceeding in a timely manner and that the design criteria are being correctly included. The submittal shall consist of the following:

1. Design analysis, in support of the submitted documents.
2. 75% complete drawings.
3. Draft specifications shall show all lined out (edited) portions of the specification sections on all items of work.
4. Environmental permit applications which are to be submitted to Corps for processing. When environmental permits are not required, the Contractor shall provide a statement with justification to that effect.
5. Colorboard(s) depicting all color/finish/material selections submitted for government approval.

4.2 Prefinal Design Review Submittal (95%)

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

The review of this submittal is to insure that the design is in accordance with the Contractor's proposal and the Contract during the design process. The Contractor shall submit the following documents for review:

1. Complete design analysis
2. Complete coordinated drawings between all disciplines
3. Complete specifications, without showing lined out (edited) portions.
4. Colorboard(s) depicting all proposed color/finish/material samples.
5. Annotated 75% comments

4.2.1 The Design Analysis submitted for Prefinal Design Review (95%) shall be in its final form. The Design Analysis shall include all backup material previously submitted and revised as necessary. All design calculations shall be included. The Design Analysis shall contain all explanatory material giving the design rationale for any design decisions which would not be obvious to an engineer reviewing the Final Drawings and Specifications.

4.2.2 The Contract Drawings submitted for Prefinal Design Review (95%) shall include the drawings previously submitted which have been revised and completed as necessary. The Contractor is expected to have completed all of his coordination checks and have the drawings in a design complete condition. The drawings shall be complete at this time including the incorporation of any design review comments generated by previous design reviews. The drawings shall contain all the details necessary to assure a clear understanding of the work throughout construction. Shop drawings will not be considered as design drawings. All design shall be shown on design drawings prior to submittal of shop drawings.

4.3 Design Complete Submittal (100%)

The Contractor shall revise the Contract Documents by incorporating any comments generated during the Prefinal Design Review (95%) and shall prepare final hard copy Contract Specifications. The Contractor shall submit the following documents for the Design Complete Submittal:

1. Design analysis, in final 100% complete form
2. Complete coordinated drawings between all disciplines
3. Complete specifications
4. Colorboard(s) depicting all final color/finish/material selections approved by Ft. Drum.
5. Annotated 95% review comments
6. DD FORM 1354 "Transfer and Acceptance of Military Real Property.
7. 100% close out of all comments

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

4.3.1 The Contractor shall submit the Design Complete Submittal (100%) not later than 30 calendar days after the Government returns the annotated Prefinal Design Review Submittal (95%).

4.3.2 Corrected Final Submittal. If a sufficient number of comments are generated by the Government during the review of the Final Design Submittal (100%), and at the option of the Contracting Officer, Contractor shall submit corrected drawings, specifications, and DD Form 1354 for compliance check of the accepted review comments of the Final Design Submittal. The Corrected Final Submittal shall be appropriately stamped to describe the submittal package as follows: "For Review Only - Corrected Final Site, Foundation and/or Utility" or "For Review Only - Correct Final Facility". Each sheet of the drawings shall be so stamped accordingly.

5.0 QUANTITY OF DESIGN SUBMITTALS

5.1 General

The documents which the Contractor shall submit to the Government for each submittal are listed and generally described hereinafter. Unless otherwise indicated, the Contractor shall submit thirty (30) copies of each item required to be submitted at the 75%, and 95% Review Submittal stages. All drawings for review submittals shall be full-size blue/black lines. At the Design Complete Submittal, the Contractor shall also submit five (5) complete full size sets and two (2) half size sets of drawings and two copies of CADD files on CD's in MicroStation format version 8.0, five (5) sets of the specifications and two (2) copies on CD's in Microsoft Word 7.0.

6.0 MAILING OF DESIGN SUBMITTALS

6.1 Mail all design submittals to the Government during design and construction, using an overnight mailing service. The Government will furnish the Contractor addresses where each copy shall be mailed to after award of contract. The submittals shall be mailed to not more than (6) different addresses.

6.2 Each design submittal shall have a transmittal letter accompanying it indicating the date, design percentage, type of submittal, list of items submitted, transmittal number and point of contact with telephone number.

7.0 COORDINATION

7.1 Written Records

Prepare a written record of each design site visit, meeting, or conference, either telephonic or personal, and furnish within five (5) working days copies to the Contracting Officer and all parties involved. The written record shall include subject, names of participants, outline of discussion, and recommendation or conclusions. Number each written record for the particular project under design in consecutive order.

7.2 Design Request for Information (RFI) List

Throughout the life of this contract the Contractor shall furnish a biweekly "RFI" list for design related items. This list shall itemize in an orderly fashion design data required by the

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

Contractor to advance the design in a timely manner. Each list shall include a sequence number, description of action item, name of the individual or agency responsible for satisfying the action item and remarks. The list will be maintained on a continuous basis with satisfied action items checked off and new action items added as required. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved. Copies of the list will be mailed to both the Administrative Contracting Officer and the agencies tasked with supplying the information.

8.0 GOVERNMENT REVIEW COMMENTS

8.1 Within 21 calendar days after Notice to Proceed, the Contractor shall submit for approval, a complete design schedule with all submittals and review times indicated in calendar dates. The Contractor shall update this schedule monthly.

8.2 After receipt, the Government will be allowed thirty (30) calendar days to review and comment on the 75% design submittal, thirty (30) calendar days to review and comment on the 95% design submittal, and thirty (30) calendar days to review and comment on the 100% design. For each design review submittal, Contracting Officer will furnish the Contractor comments from the various design sections and from other concerned agencies involved in the review process. The review will be for the conformance with the technical requirements of the solicitation and the Successful Offeror's Proposal.

8.3 Prior to each submission (75%, 95% and 100%) the contractor shall submit two (2) copies of the complete package requirements to the Contracting Officers Representative for review to check if the package meets the requirements for that submission. The government shall have 3 working days to review and comment on the package. The contractor shall receive the comments at the end of the third day and shall have three additional days to incorporate all comments. The review and comment period as stated above shall begin only after the contractor incorporates all comments and sends the required number of sets to the reviewers for that review submission.

8.4 If the Contractor disagrees technically with any comment or comments and does not intend to comply with the comment, he must clearly outline, with ample justification, the reasons for noncompliance within five (5) calendar days after receipt of these comments in order to resolve the comment between all parties. The Contractor shall furnish disposition of all comments, in writing, with the next scheduled submittal. The Contractor is cautioned in that if he believes the action required by a comment exceeds the requirements of this contract, that he should take no action and notify the Contracting office in writing immediately. Review conferences will be held for each design submittal at Fort Drum. The Contractor shall bring the personnel that developed the design submittal to the review conference. These conferences will take place the week after the review period.

8.5 If a design submittal is over one (1) calendar day late in accordance with the latest design schedule, the Government review period will be extended 7 calendar days. The review conference will be held the week after the new review period. Submittal date revisions must be made in writing at least one (1) week prior to the latest submittal date.

8.6 Review of submittals will not occur during period of December 22, 2004 through January 6, 2004. Submittals which override on this period will have review period extended to reflect this down time.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

8.7 Government will have up to 30 days to issue construction NTP after review period of the 100% back check ends.

9.0 DESIGN ANALYSIS

9.1 Media and Format

Present the design analysis on 8½ inch by 11-inch paper except that larger sheets may be used when required for graphs or for other special calculation forms. All sheets shall be in reproducible form. The material may be typewritten, hand lettered, handwritten, or a combination thereof, provided it is legible. Side margins shall be 1-inch minimum to permit side binding and head-to-head printing. Bottom margins shall be 1-1/4 inches, with page numbers centered 1 inch from the bottom.

9.2 Organization

Assign the several parts and sheets of the design analysis a sequential binding number and bind them under a cover indicating the name of the facility and project number, if applicable. The title page shall carry the designation of the submittal being made. The complete design analysis presented for final review with the final drawings and specifications shall carry the designation "FINAL DESIGN ANALYSIS" on the title page.

9.3 Design Calculations

Design calculations are a part of the design analysis. Design calculations for the civil design (storm water, sanitary sewer, water, etc.) shall be in US customary units. When they are voluminous, bind them separately from the narrative part of the design analysis. Present the design calculations in a clean and legible form incorporating a title page and index for each volume. Furnish a table of contents, which shall be an index of the indices, when there is more than one volume. Identify the source of loading conditions, supplementary sketches, graphs, formulae, and references. Explain all assumptions and conclusions. Calculation sheets shall carry the names or initials of the designer and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

10.0 DRAWINGS

10.1 Prepare all drawings on Computer-Aided Design and Drafting (CADD) so they are well arranged and placed for ready reference and so that they present complete information. Drawings shall be complete. Unnecessary work such as duplicate views, notes and lettering, and repetition of details shall not be permitted. Do not show standard details not applicable to the project. Minimize unnecessary wasted space. Do not include details of standard products or items on the drawings which are adequately covered by specifications. Detail the drawings such that conformance with the RFP can be checked and to the extent that shop drawings can be checked. Do not use shop drawings as design drawings. The design drawings shall consist of drawing on an 840 mm x 1200 mm format. The Contractor shall use standard Corps of Engineers title blocks and borders on all drawings. Submit an index of drawings with each submittal. The Contracting Officer will furnish the Contractor file, drawing and specification numbers and CADD file names for inclusion in the title blocks of the drawings.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- 10.2 Create all drawings using CADD methods in MicroStation or AutoCAD format. Save all Design Complete CADD files as MicroStation 8.0. The Contractor shall use A/E/C CADD Standards Release 2.0, available at <http://tsc.wes.army.mil/intro.asp>. When a project is started the designer must contact the New York District Project Engineer, to obtain the project's CADD code. The sheet reference number (e.g., A-3) and the CADD code (e.g., E123) are combined to create the CADD file name (e.g., A3E123). This shall insure proper naming of files and tracking of the project within the New York District.
- 10.3 Only standard fonts provided by MicroStation or AutoCAD are to be used in the creation of CADD files. No fonts created by third parties or the designer are permitted.
- 10.4 The uses of Reference files and Xrefs during the design stage is up to the discretion of the designers. All CADD files at Design Complete submittal shall be free-standing, independent files, and not supported by reference files. All Reference files (MicroStation) and all Xrefs files (AutoCAD) shall be removed at Design Complete submittal.
- 10.5 Submit all Design Complete files including drawings and specifications on CD ROM with "Read Me" file. Submit (3) copies of all disks.
- 10.6 All drawings shall be prepared in hard metric scale.
- 10.6.1 The building drawings shall consist of 1:100 scale minimum floor plans. Draw elevations to a 1:100 scale and other visual information as required. Draw building wall sections at a minimum of 1:20 scale.
- 10.6.2 Use a minimum scale of 1:500 for the site and exterior utility drawings, unless otherwise indicated.
- 11.0 SPECIFICATIONS
- 11.1 Technical Specifications for Construction shall be prepared using UFGS guide specifications which establish the minimum basis for quality and product selection. The Contractor shall edit the guide specifications, but edits shall conform to the specific minimum requirements of this RFP and are subject to approval by the Government. Specifications for items not identified in the RFP or UFGS guide specifications shall be written by the Contractor. If the design is based on a specific product, the specification shall consist of the important features of the product. The specification shall be detailed enough such that another product meeting the specification could be substituted and it would not adversely impact the project. The following listing of technical specifications is provided to indicate, as a minimum, those guide specifications which should be utilized for design and construction of the project.
- 11.2 Submittal Register
- The Contractor shall develop the submittal requirements for construction during the design phase of the contract, by producing a Contractor Submittal Register during design. Attach the submittal register for the submittal requirements of the entire project. Prepare the Submittal Register on ENG Form 4288. The Contractor shall be responsible for listing all required submittals necessary to insure the project requirements are complied with. The Register shall identify submittal items such as shop drawing, manufacturer's literature, certificates of compliance, material samples, guarantees, test results, etc. that the Contractor shall submit

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

for review and/or approval action during the life of the construction contract. The Contractor shall place all the Submittal Register pages in an appendix to Section 01330 SUBMITTAL PROCEDURES of the final specifications.

12.0 SURVEYING AND MAPPING

12.1 Survey Data

A site survey has been conducted and mapping prepared for the project site.

12.1.1 The Contractor shall obtain any additional survey data and mapping required, as an extension of the provided mapping. A Digital Terrain Model (DTM) is not available.

13.0 CONTENTS OF DESIGN SUBMITTALS

13.1 The 75% Design Submittals

Submittals shall contain, as a minimum, the following:

13.1.1 Paving, Grading and Drainage:

1. The designer is required to contact Fort Drum Field Office to verify the correct procedure to follow to obtain construction permits. The designer shall prepare all permit applications required to a "READY FOR SIGNATURE" condition and forward them to the Contracting Officer for appropriate signatures and submittal to the state. All contacts with state agencies shall be documented in writing and furnished to the Corps of Engineers at the 95% submittal.
2. Pavement design calculations, details of pavement sections, paving plan layout and limits, jointing diagrams, joint types and details, striping details, and entrance locations and details.
3. Typical cross section for grading, paving, and excavation of ditches and backslopes and fill sections.
4. Grading plans with site drainage system, low points and culverts located, drainage ditches identified, pipe sizes, types, and inverts shown. Provide erosion control details as required.

13.1.2 Geotechnical

1. Additional geotechnical investigation if required.
2. Confirmation of final design parameters.
3. Foundation design analysis

13.1.3 Water Supply and Sanitary Sewage

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

1. Details of utility systems, appurtenances and detailed calculations.
2. Utility plans fully coordinated with other disciplines and checked for clearances at all utility crossings.

13.1.4 Landscaping and Fencing

1. Permanent seeding requirements, species types and mixtures, conditioners and soil amendments as required for final site turf establishment.
2. Temporary seeding plan to be coordinated with site grading and drainage. Provide erosion control measures and specific seed mixtures for each condition.
3. Fencing plan, installation details, and typical sections.
4. Gate locations, types, and sizes, installation details and sections.

13.1.5 Architectural

1. Design development plans indicating dimensions, column lines, major detail references, door numbers, etc.
2. Exterior elevations indicating materials, finishes, colors, etc.
3. Building sections indicating construction, materials, etc.
4. Wall sections and stair sections indicating construction, materials, dimensions, etc.
5. Finish schedules. Colorboards showing all color selections (50 mm x 75 mm samples minimum) for Government approval.
6. Door and window schedules.
7. Detail plans including:
 - a. Room names.
 - b. Door numbers.
 - c. Equipment.
 - d. Toilet accessories.
 - e. Dimensions.
 - f. Stair layouts.
 - g. Trench and service pit.

13.1.6 Structural Design

1. Description of the method of providing lateral stability for the structural system to meet seismic, wind and other load requirements as stated in Section 01010. Include sufficient calculations to verify the adequacy of the method.
2. Calculations for all principal roof, floor and foundation members.
3. Drawings showing roof and floor framing plans as applicable. Structural members will be shown on the plans. A foundation plan shall also be furnished showing main footings and

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

grade beams. Where beam, column, and footing schedules are used, show schedules and fill in sufficient items to indicate method to be used. Show typical bar bending diagrams. Typical sections shall be furnished for roof, floor, and foundation conditions. Structural drawings shall be separate from architectural drawings.

4. Include anchor bolt locations and details on foundation drawings.
5. Computer analyses used shall be widely accepted, commercially available programs, or complete documentation shall be provided.

13.1.7 Plumbing

1. List of all references used in the design including Government design documents and industry standards.
2. Detail calculations for systems such as sizing of natural gas piping.

13.1.8 Fire Suppression System

1. List of all references used in the design including Government design documents and industry standards.
2. Provide description of required fire protection including extinguishing equipment, detection equipment, alarm equipment and water supply. Alarm and detection equipment shall interface to requirements of Electronic System.
4. Plan and riser diagram of the sprinkler system.
5. Hydraulic calculations based on water flow test for each sprinkler system to insure that flow and pressure requirements can be met with current water supply. See Water Supply and Sanitary Sewage.

13.1.9 Heating and Ventilation (H&V)

1. Energy conservation shall be in accordance with UFC 3-400-01 Design: Energy Conservation.
2. Expanded and updated computerized heating load calculations and energy consumption performance calculations to be comprehensive with the progression of the design, as necessary.
3. H&V legend.
4. Complete H&V and plumbing equipment schedules with manufacturer's name and model number.
5. H&V equipment plans and elevations, complete with ductwork, piping, control panels and control devices.
6. Boiler Room and Mechanical Room part plans and elevations indicating all equipment, tube pull clearances, piping, ductwork, control panels and devices, dampers, breechings,

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

foundations pads, access doors, maintenance clearances, vents, drain piping, blowdown piping, chimneys, access doors, emergency break glass stations, maintenance platforms and ladders as may be required.

7. H&V details, complete, including but not limited to details for vibration isolation, seismic restraints and sway bracing, breeching and chimney, roof penetrations, and underground concrete trench water and/or refrigerant piping supports.
9. Direct digital automatic temperature control and energy management control system points schedules. Points schedules shall be complete and fully coordinated with the existing Base Trane Tracer Summit remote central DDC EMCS, via telephone modem and portable operator terminal workstation, to provide complete remote central control, monitoring and alarm capability, in addition to local stand-alone DDC monitoring, control and alarm functions.
10. H&V controls, including automatic temperature controls sequences of operation, fully detailed and consistent with the DDC system points schedules drawings.

13.1.10 Interior Electrical System

1. A narrative describing the electrical distribution system.
2. Floor plans developing the branch circuit wiring design for lighting, power, mechanical, and miscellaneous equipment.
3. Grounding system plan and related details.
4. Switchboard and panel schedules developed to this design level.
5. An upgraded power riser or one-line diagram.
6. Floor plans indicating the major components of the power distribution system, including service switchboard, panelboards, dimming control units, motor starter banks, etc. and the main H&V equipment.
7. An upgraded lighting fixture schedule.
8. A symbol list.
9. Coordinated power systems analysis study.

13.1.11 Exterior Electrical System

1. A site electrical plan indicating the service requirements; connection details for splicing into medium voltage loop; primary feeder routing including manholes; underground branch circuit routing for grade mounted electrical equipment, parking lot lighting; telephone service routing including manholes.

13.1.12 Electronic Systems

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

1. Riser diagrams and details of the low voltage systems: fire alarm, telephone, which have been coordinated with the base requirements.
2. Floor plans indicating the low voltage system services.
3. Complete system construction and point to point wiring schematic drawings, including all component values and showing complete letter and number identification of all wire and cable as well as jacks, terminals, and connectors.
4. All panels, plates, and designation strips, including details relating to terminology, engraving, finish, and color.
5. All custom designed consoles, tables, carts, support bases, and shelves.
6. Schematic drawings of all custom components, assemblies, and circuitry.
7. All equipment modifications.
8. Run sheets or field wiring details.
9. Patch panel assignment layout drawing.
10. Front elevation drawings of each equipment rack.
11. All items of equipment whether a stock manufactured item or custom built shall be supported by complete and detailed schematic drawings and replacement parts lists. No "black boxes" or unidentified components shall be acceptable.

13.1.13 Draft edit of all specification sections.

13.2 The 95% Design Submittals

Submittals shall contain, as a minimum, the following:

13.2.1 Incorporate any changes required by comments on 75% Design Submittal.

13.2.2 Construction Permits:

The designer is required to contact Fort Drum Field Office to verify the correct procedure to follow to obtain construction permits. The designer shall prepare all permit applications required to a "READY FOR SIGNATURE" condition and forward them to the Contracting Officer for appropriate signatures and submittal to the state. All contacts with state agencies shall be documented in writing and furnished to the Corps of Engineers at the 95% submittal.

13.2.3 Civil:

Complete site and utility drawings which are coordinated with the specifications and the other engineering disciplines. Ensure that the plans are in compliance with the applicable codes and permits. Final checked calculations for pavement design and all other civil work. It will be the Contractor's responsibility to implement the comments generated from any design review submittal as well as verify the consistency between plans and specification.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

The evaluation of the Contractor's submittals shall be based on the degree to which the submittal meets the requirements set forth in this document and the specifications.

13.2.4 Turfing:

1. Complete seeding specifications for establishing permanent and temporary turf on site areas not paved.
2. Topsoil and soil amendment specifications shall be responsive to existing soil (pH, texture, organic content) as established by soil tests.

13.2.5 Architectural

1. Complete architectural drawings which are coordinated with the other engineering disciplines. Ensure that the plans are in compliance with the applicable codes. It will be the Contractor's responsibility to implement the comments generated from any design review submittal as well as verify the consistency between plans and specification. The evaluation of the Contractor's submittals shall be based on the degree to which the submittal meets the requirements set forth in this document and the specifications.

13.2.6 Structural Design

1. Final checked calculations for all structural members.
2. Final structural drawings coordinated with all other design disciplines.
3. The final structural drawings shall contain the following information as a set of general notes:

The allowable soil bearing value.

Frost depth.

The design stresses of structural materials used.

The design live loads used in the design of various portions of the structures.

The design wind speed, exposure, and importance factor.

The seismic values used in design.

4. All structural drawings and calculations shall be checked.

13.2.7 Plumbing

1. Final design drawings and calculations
2. Shop drawings

13.2.8 Fire Suppression System

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

1. A file of the input data used in the computer program to design the fire suppression system.
2. Final design drawings and calculations
3. Shop drawings

13.2.9 Heating and Ventilation (H&V)

1. All H&V calculations developed through the 75% submittals updated, expanded, finalized and completed.
2. All H&V drawings completed and finalized.
3. Shop drawings of all equipment and accessories as scheduled and as specified, complete with both "point-to-point" and "ladder type schematic" wiring diagrams for power and automatic controls, fully coordinated and combined into a complete coherent system, in accordance with the specified requirements of Section 15951.

13.2.10 Interior Electrical System

1. A coordination study with appropriate curves to show that all protective devices have been fully coordinated. Completed short circuit calculations for the entire electrical system shall also be provided. All equipment shall be identified by manufacturer's name and catalog number.
2. Complete voltage drop and lighting calculations. The voltage drop calculations shall use the same single line diagram as the short circuit calculations and shall show drops at the same locations as short circuit currents are shown. Lighting calculations (zonal cavity method for interior and point-to-point for exterior) shall be provided for all rooms and spaces and all exterior locations requiring illumination.
3. A completed version of the 75% design narrative submittal reflecting the design as submitted. The aforementioned calculations shall be included with the narrative. The calculations and coordination study shall have the seal of the registered engineer who performed the same affixed to the cover sheet.
4. All details completed. Congested areas which cannot be clearly shown at the drawing scale, shall be shown by expanded scale drawings.
5. Completed drawings thoroughly checked for discipline conflicts to insure that the proper electrical connections are provided for equipment of other disciplines and that there are no conflicts between the location of electrical equipment and equipment of other disciplines.
6. Completed drawings also checked for intradiscipline conflicts.

13.2.11 Exterior Electrical Distribution System

1. A coordination study with appropriate curves to show that ALL protective devices have been fully coordinated. Completed short circuit calculations for the entire electrical

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

system shall also be provided. All equipment shall be identified by manufacturer's name and catalog number.

2. Complete voltage drop and lighting calculations. The voltage drop calculations shall use the same single line diagram as the short circuit calculations and shall show drops at the same locations as short circuit currents are shown. Lighting calculations (zonal cavity method for interior and point-to-point for exterior) shall be provided for all rooms and spaces and all exterior locations requiring illumination.
3. A completed version of the 75% design narrative submittal reflecting the design as submitted. The aforementioned calculations shall be included with the narrative. The calculations and coordination study shall have the seal of the registered engineer who performed the same affixed to the cover sheet.
4. Completed drawings with all comments and any other changes incorporated.
5. All details completed. Congested areas which cannot be clearly shown at the drawing scale, shall be shown by expanded scale drawings.
6. Completed drawings thoroughly checked for discipline conflicts to insure that the proper electrical connections are provided for equipment of other disciplines that there are no conflicts between the location of electrical equipment and equipment of other disciplines.
7. Completed drawings also checked for intradiscipline conflicts.

13.2.12 Electronic Systems

1. Submit completed version of the 75% design drawings indicating low voltage systems, user diagrams, floor plans and details.

13.2.13 Complete specifications for all sections

13.3 Design Complete Submittal (100%)

- 13.3.1 Submit complete drawings, specifications, calculations, and all other materials prepared during design, with New York State Architect/Engineer professional seal and signature.

13.3.2 DESIGN CHANGES, AFTER 100% DESIGN ACCEPTANCE & COE AUTHORIZATION TO PROCEED TO CONSTRUCTION: Any change to the accepted 100% design MUST be requested by the Contractor in writing (provide PE stamped drawings) at least 30 days prior to the desired implementation of the proposed change. The Contractor must provide compelling evidence the proposed change is in conformance with the contract documents. The Government reserves the right to reject the changes and will give a positive or negative response within 30 days of receipt. If the Government decides to proceed with the proposed change a bilateral contract modification will be prepared or a letter of agreement to alter the 100% design will be issued. **Changes made to the accepted 100% design without prior approval will be considered deficient work and no payment will be made for this deficient work.**

14.0 DD FORM 1354 "TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY"

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- 14.1 This document is a detailed listing of all real property by category description for the designed facility. It shall be accomplished at the completion of design and furnished with the Final Design Submittal.
- 15.0 RESIDENT MANAGEMENT SYSTEM (RMS)
- 15.1 The Contractor shall use the Government furnished software module entitled "Resident Management System (RMS)" to create the Submittal Register and the DD Form 1354 during the design phase of this contract. The data generated by the Contractor during the design phase will be used by the Contractor Quality Control Manager in the construction phase of the project.
- 16.0 DESIGN REVIEW COMMENT SUBMISSION
- 16.1 All design review comments shall be submitted for each phase of the project review. The contractor shall evaluate all comments and provide written responses.
- 16.2 All comments shall be evaluated by the contractor and closed by the person who inputted the comment prior to the start of construction.

-- End of Section --

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

SECTION 01320

PROJECT SCHEDULE:
NETWORK ANALYSIS SYSTEM
(NYD Rev. 2/03)

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01300 SUBMITTAL PROCEDURES:

SD-07 Schedules

Initial Project Schedule; GA. Preliminary Project Schedule;
GA. Periodic Schedule Updates; GA.

Four copies of the schedules showing codes, values, categories, numbers, items, etc., as required.

SD-08 Statements

Qualifications; FIO.

Documentation showing qualifications of personnel preparing schedule reports.

SD-09 Reports

Narrative Report; FIO. Schedule Reports; FIO.

Four copies of the reports showing numbers, descriptions, dates, float, starts, finishes, durations, sequences, etc., as required.

1.2 QUALIFICATIONS

The Contractor shall designate an authorized representative who shall be responsible for the preparation of all required project schedule reports. This person shall have previously created and reviewed computerized schedules. Qualifications of this individual shall be submitted to the Contracting Officer for review with the Preliminary Project Schedule submission.

PART 2 PRODUCTS (Not Applicable)

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

PART 3 EXECUTION

3.1 GENERAL

Pursuant to the Contract Clause, SCHEDULE FOR CONSTRUCTION CONTRACTS a Project Schedule as described below shall be prepared. The Contractor shall be responsible for scheduling of all procurement and construction activities as well as design activities if applicable to the project. The scheduling of construction shall be the responsibility of the Contractor. Contractor management personnel shall actively participate in its development. Subcontractors and suppliers working on the project should also contribute in developing and maintaining an accurate Project Schedule. The approved Project Schedule shall be used to measure the progress of the work, to aid in evaluating time extensions, and to provide the basis of all progress payments.

3.2 BASIS FOR PAYMENT

The schedule shall be the basis for measuring Contractor progress. Lack of an approved schedule or scheduling personnel shall result in an inability of the Contracting Officer to evaluate Contractor progress for the purposes of payment. Failure of the Contractor to provide all information, as specified below, shall result in the disapproval of the entire Project Schedule submission and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes. In the case where Project Schedule revisions have been directed by the Contracting Officer and those revisions have not been included in the Project Schedule, then the Contracting Officer may hold retainage up to the maximum allowed by contract, each payment period, until revisions to the Project Schedule have been made.

3.3 PROJECT SCHEDULE

The computer software system utilized by the Contractor to produce the Project Schedule shall be capable of providing all requirements of this specification. Failure of the Contractor to meet the requirements of this specification shall result in the disapproval of the schedule. Manual methods used to produce any required information shall require approval by the Contracting Officer.

3.3.1 Use of the Critical Path Method

The Critical Path Method (CPM) of network calculation shall be used to generate the Project Schedule. The Contractor shall provide the Project Schedule in either the Precedence Diagram Method (PDM) or the Arrow Diagram Method (ADM).

3.3.2 Level of Detail Required

With the exception of the initial and preliminary schedule submission, the Project Schedule shall include an appropriate level of detail. Failure to develop or update the Project Schedule or provide data to the Contracting Officer at the appropriate level of detail, as specified by the Contracting Officer, shall result in the disapproval of the schedule. The Contracting Officer will use, but is not limited to, the following conditions to determine the appropriate level of detail to be used in the Project Schedule.

3.3.2.1 Activity Durations

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

Contractor submissions shall be required to follow the direction of the Contracting Officer regarding reasonable activity durations. Reasonable durations are those that allow the progress of activities to be accurately determined between payment periods. A rule of thumb, that the Contractor should use, is that less than 2 percent of all non-procurement activities' Original Durations shall be greater than 20 days.

3.3.2.2 Design and Permit Activities

The Contractor shall integrate design and permitting activities, including necessary conferences and follow-up actions and design package submission dates into the schedule if these items are applicable to the project.

3.3.2.3 Procurement Activities

Tasks related to the procurement of long lead materials or equipment shall be included as separate activities in the project schedule. Long lead materials and equipment are those materials that have a procurement cycle of over 90 days. Examples of procurement process activities include, but are not limited to: submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing.

3.3.2.4 Government Activities

Government and other agencies activities that could impact progress shall be shown. These activities include, but are not limited to: approvals, inspections, utility tie-in, Government Furnished Equipment (GFE) and notice to proceed for phasing requirements.

3.3.2.5 Workers Per Day

All activities shall have an estimate of the average number of workers per day that are expected to be used during the execution of the activity to produce the expected completion date. If no workers are required for an activity, in the case of activities related to procurement, for example, then the activity shall be identified as using zero workers per day. The workers per day information for each activity shall be identified by the Workers Per Day Code.

3.3.2.6 Responsibility

All activities shall be identified in the project schedule by the party responsible to perform the work. Responsibility includes, but is not limited to, the subcontracting firm, contractor work force, or government agency performing a given task. Activities shall not belong to more than one responsible party. The responsible party for each activity shall be identified by the Responsibility Code.

3.3.2.7 Work Areas

All activities shall be identified in the project schedule by the work area in which the activity occurs. Activities shall not be allowed to cover more than one work area. The work area of each activity shall be identified by the Work Area Code.

3.3.2.8 Modification or Claim Number

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

Any activity that is added or changed by contract modification or used to justify claimed time shall be identified by a mod or claim code that changed the activity. Activities shall not belong to more than one modification or claim item. The modification or claim number of each activity shall be identified by the Mod or Claim Number.

3.3.2.9 Bid Item

All activities shall be identified in the project schedule by the Bid Item to which the activity belongs. An activity shall not contain work in more than one bid item. The bid item for each appropriate activity shall be identified by the Bid Item Code.

3.3.2.10 Phase of Work

All activities shall be identified in the project schedule by the phases of work in which the activity occurs. Activities shall not be allowed to contain work in more than one phase of work. The project phase of each activity shall be by the unique Phase of Work Code.

3.3.2.11 Category of Work

All Activities shall be identified in the project schedule according to the category of work which best describes the activity. Category of work refers, but is not limited to, the procurement chain of activities including such items as submittals, approvals, procurement, fabrication, delivery, installation, start-up, and testing. The category of work for each activity shall be identified by the Category of Work Code.

3.3.2.12 Feature of Work

All activities shall be identified in the project schedule according to the feature of work to which the activity belongs. Feature of work refers, but is not limited to a work breakdown structure for the project. The feature of work for each activity shall be identified by the Feature of Work Code.

3.3.2.13 Critical Activities.

In addition to other activities as required to complete the project, the Progress schedule shall include the following as separate line activities:

- a. Submission and approval of mechanical/electrical layout drawings.
- b. Submission and approval of O & M Manuals.
- c. Submission and approval of as-built drawings.
- d. Submission and approval of 1354 data and installed equipment lists.
- e. Submission and approval of HVAC Testing and Balancing plan.
- f. HVAC Testing and Balancing and submission and approval of report.
- g. Submission and approval of HVAC Commissioning plan.
- h. HVAC Commissioning.
- i. Other Systems testing as required.
- j. Warranty Action Preparation
- k. Pre-final inspection.
- l. Correction of punchlist for pre-final inspection.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

m. Final inspection.

3.3.2.14. HVAC Testing, Balancing and Commissioning.

If this contract contains requirements for Heating, Ventilation and Air Conditioning Testing and Balancing and Commissioning, these activities must be allocated sufficient time and personnel resources by the Contractor so that they can be accomplished within time allowed for project completion. These activities are necessary to assure detection of any deficiencies in the HVAC Systems and avoid warranty callbacks.

3.3.3 Scheduled Project Completion

The schedule interval shall extend from notice-to-proceed to the contract completion date.

3.3.3.1 Project Start Date

The schedule shall start no earlier than the date that the Notice to Proceed (NTP) was acknowledged. The Contractor shall include as the first activity in the project schedule an activity called "Start Project". The "Start Project" activity shall have: a "ES" constraint, a constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.3.2 Constraint of Last Activity

Completion of the last activity in the schedule shall be constrained by the contract completion date. Calculation on project updates shall be such that if the early finish of the last activity falls after the contract completion date, then the float calculation shall reflect a negative float on the critical path. The Contractor shall include as the last activity in the project schedule an activity call "End Project". The "End Project" activity shall have: a "LF" constraint, a constraint date equal to the completion date for the project, and a zero day duration.

3.3.3.3 Early Project Completion

In the event the project schedule shows completion, the project prior to the contract completion date, the Contractor shall identify those activities that have been accelerated and/or those activities that are scheduled in parallel to support the Contractor's "early" completion. Contractor shall specifically address each of the activities noted at every project schedule update period to assist the Contracting Officer to evaluate the Contractor's ability to actually complete prior to the contract period.

3.3.4 Interim Completion Dates

Contractually specified interim completion dates shall also be constrained to show negative float if the early finish date of the last activity in that phase falls after the interim completion date.

3.3.4.1 Start Phase

The Contractor shall include as the first activity for a project phase an activity called "Start Phase X"

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

where "X" refers to the phase of work. The "Start Phase X" activity shall have: a "ES" constraint, a constraint date equal to the date that the NTP was acknowledged, and a zero day duration.

3.3.4.2 End Phase

The Contractor shall include as the last activity in a project phase an activity called "End Phase X" where "X" refers to the phase of work. The "End Phase X" activity shall have: a "LF" constraint, a constraint date equal to the completion date for the project, and a zero day duration.

3.3.4.3 Phase X

The Contractor shall include a hammock type activity for each project phase called "Phase X" where "X:" refers to the phase of work. The "Phase X" activity shall be logically tied to the earliest and latest activities in the phase.

3.3.5 Default Progress Data Disallowed

Actual Start and Finish dates shall not be automatically updated by default mechanisms that may be included in CPM scheduling software systems. Actual Start and Finish dates on the CPM schedule shall match those dates provided from Contractor Quality Control Reports. Failure of the Contractor to document the Actual Start and Finish dates on the Daily Quality Control report for every in progress or completed activity and insure that the data contained on the Daily Quality Control reports is the sole basis for schedule updating shall result in the disapproval of the Contractor's schedule and the inability of the Contracting Officer to evaluate Contractor progress for payment purposes.

3.3.6 Out-of-Sequence Progress

Activities that have posted progress without predecessors being completed (Out-of-Sequence Progress) shall be allowed only by the case-by-case approval of the Contracting Officer. The Contracting Officer may direct that changes in schedule logic be made to correct any or all out-of-sequence work.

3.3.7 Extended Non-Work Periods

Designation of Holidays to account for non-work periods of over 5 days shall not be allowed. Non-work periods of over 5 days shall be identified by addition of activities that represent the delays. Modifications to the logic of the project schedule shall be made to link those activities that may have been impacted by the delays to the newly added delay activities.

3.3.8 Negative Lags

Lag durations contained in the project schedule shall not have a negative value.

3.4 PROJECT SCHEDULE SUBMISSIONS

The Contractor shall provide the submissions as described below. The data disk, reports, and network diagrams required for each submission are contained in paragraph SUBMISSION REQUIREMENTS.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

3.4.1 Preliminary Project Schedule Submission

The Preliminary Project Schedule, defining the Contractor's planned operations for the first 60 calendar days shall be submitted for approval within 10 calendar days after Notice to Proceed is acknowledged. The approved preliminary schedule shall be used for payment purposes not to exceed 60 calendar days after Notice to Proceed.

3.4.2 Initial Project Schedule Submission

The Initial Project Schedule shall be submitted for approval within 40 calendar days after Notice to Proceed. The schedule shall provide a reasonable sequence of activities which represent work through the entire project and shall be at a reasonable level of detail.

3.4.3 Periodic Schedule Updates

Based on the result of progress meetings, specified in "Periodic Progress Meetings," the Contractor shall submit periodic schedule updates. These submissions shall enable the Contracting Officer or to assess Contractor's progress. If the Contractor fails or refuses to furnish the information and project schedule data, which in the judgment of the Contracting Officer or authorized representative, is necessary for verifying the contractor's progress, the Contractor shall be deemed not to have provided an estimate upon which progress payment may be made.

3.4.4 Standard Activity Coding Dictionary

The Contractor shall submit, with the Initial Project Schedule, a coding scheme that shall be used throughout the project for all activity codes contained in the schedule. The coding scheme submitted shall list the values for each activity code category and translate those values into project specific designations. For example, a Responsibility Code Value, "ELE", may be identified as "Electrical Subcontractor." Activity code values shall represent the same information throughout the duration of the contract. Once approved with the Initial Project Schedule submission, changes to the activity coding scheme must be approved by the Contracting Officer's Representative.

3.5 SUBMISSION REQUIREMENTS

The following items shall be submitted by the Contractor for the initial submission, and every periodic project schedule update throughout the life of the project:

3.5.1 Data Disks

Two data disks containing the project schedule shall be provided. Data on the disks shall be in the format specified in Appendix A, "Standard Data Exchange Format".

3.5.1.1 File Medium

Required data shall be submitted on CD's, formatted to hold 700 MB of data, under the word

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

operating system.

3.5.1.2 Disk Label

A permanent exterior label shall be affixed to each disk submitted. The label shall indicate the type of schedule (Initial, Update, or Change), full contract number, project name, project location, data date, name and telephone number or person responsible for the schedule.

3.5.1.3 File Name

Each file submitted shall have a name related to either the schedule data date, project name, or contract number. The Contractor shall develop a naming convention that will insure that the names of the files submitted are unique. The Contractor shall submit the file naming convention to the Contracting Officer for approval.

3.5.2 Narrative Report

A Narrative Report shall be provided with each update of the project schedule. This report shall be provided as the basis of the Contractor's progress payment request. The Narrative Report shall include: a description of activities along the 4 most critical paths, a description of current and anticipated problem areas or delaying factors and their impact, and an explanation of corrective actions taken.

3.5.3 Approved Changes Verification

Only project schedule changes that have been previously approved by the Contracting Officer shall be included in the schedule submission. The Narrative Report shall specifically reference, on an activity by activity basis, all changes made since the previous period and relate each change to documented, approved schedule changes.

3.5.4 Schedule Reports

The format for each activity for the schedule reports listed below shall contain: Activity Numbers, Activity Description, Original Duration, Remaining Duration, Early Start Date, Early Finish Date, Late Start Date, Late Finish Date, Total Float. Actual Start and Actual Finish Dates shall be printed for those activities in-progress or completed.

3.5.4.1 Activity Report

A list of all activities sorted according to activity number or "I-NODE" AND "J-NODE" and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be used as the secondary sort.

3.5.4.2 Logic Report

A list of Preceding and Succeeding activities for every activity in ascending order by activity number and then sorted according to Early Start Date. For completed activities the Actual Start Date shall be

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

used as the secondary sort.

3.5.4.3 Total Float Report

A list of all activities sorted in ascending order of total float. Activities which have the same amount of total float shall be listed in ascending order of Early Start Dates.

3.5.4.4 Earnings Report

A compilation of the Contractor's Total Earnings on the project from the Notice to Proceed until the most recent Monthly Progress Meeting. This report shall reflect the Earnings of specific activities based on the agreements made in the field and approved between the Contractor and Contracting Officer at the most recent Monthly Progress Meeting. Provided that the Contractor has provided a complete schedule update, this report shall serve as the basis of determining Contractor Payment. Activities shall be grouped by bid item and sorted by activity numbers. This report shall: sum all activities in a bid item and provide a bid item percent; complete and sum all bid items to provide a total project percent complete. The printed report shall contain, for each activity: [Activity Number] [or] ["i-node" and "j-node"], Activity Description, Original Budgeted Amount, Total Quantity, Quantity to Date, Percent Complete (based on cost), Earnings to Date.

3.5.4.5 Labor Loading.

For each activity shown on the logic report list the total amount of work required for the activity in man-hours, the number of workers assigned to the activity, the expected production rate for a worker, and the length of time (in work days) required to render the expected completion date for the activity. Completion dates on this report must agree with those on the logic report.

3.5.5 Network Diagram

The network diagram shall be required on the initial schedule submission and on bi-monthly (60 days) schedule update submissions. In addition to other submission requirements, a single mylar reproduceable 20 inch by 30 inch size shall be submitted. The diagram shall also The network diagram shall depict and display the order and interdependence of activities and the sequence in which the work is to be accomplished. The Contracting Officer will use, but is not limited to, the following conditions to review compliance with this paragraph:

3.5.5.1 Continuous Flow

Diagrams shall show a continuous flow from left to right with no arrows from right to left. The activity or event number, description, duration, and estimated earned value shall be shown on the diagram.

3.5.5.2 Project Milestone Dates

Dates shall be shown on the diagram for start of project, any contract required interim completion dates, and contract completion dates.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

3.5.5.3 Critical Path

The critical path shall be clearly shown.

3.5.5.4 Banding

Activities shall be grouped to assist in the understanding of the activity sequence. Typically, this flow will group activities by category of work, work area and/or responsibility.

3.5.5.5 S-Curves

Earnings curves showing projected early and late earnings and earnings to date.

3.6 PERIODIC PROGRESS MEETINGS

Progress meetings to discuss payment shall include a monthly on- site meeting or other regular intervals mutually agreed to at the preconstruction conference. During this meeting the Contractor will describe, on an activity by activity basis, all proposed revisions and adjustments to the project schedule required to reflect the current status of the project. The Contracting Officer will approve activity progress, proposed revisions, and adjustments as appropriate.

3.6.1 Meeting Attendance

The Contractor's Project Manager and Scheduler shall attend the regular progress meeting.

3.6.2 Update Submission Following Progress Meeting

A complete update of the project schedule containing all approved progress, revisions, and adjustments, based on the regular progress meeting, shall be submitted not later than 4 working days after the monthly progress meeting.

3.6.3 Progress Meeting Contents

Update information, including Actual Start Dates, Actual Finish Dates, Remaining Durations, and Cost to Date shall be subject to the approval of the Contracting Officer. The following minimum set of items which the Contractor shall address, on an activity by activity basis, during each progress meeting.

3.6.3.1 Start and Finish Dates

The Actual Start and Actual Finish dates for each activity currently in-progress or completed activities.

3.6.3.2 Time Completion

The estimated Remaining Duration for each activity in-progress. Time-based progress calculations must be based on Remaining Duration for each activity.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

3.6.3.3 Cost Completion

The earnings for each activity started. Payment shall be based on earnings for each in-progress or completed activity. Payment for individual activities shall not be made for work that contains quality defects. A portion of the overall project amount may be retained based on delays of activities.

3.6.3.4 Logic Changes

All logic changes pertaining to Notice to Proceed on change orders, change orders to be incorporated into the schedule, contractor proposed changes in work sequence, corrections to schedule logic for out-of-sequence progress, lag durations, and other changes that have been made pursuant to contract provisions shall be specifically identified and discussed.

3.6.3.5 Other Changes

Other changes required due to delays in completion of any activity or group of activities are those delays beyond the Contractors control such as strikes and unusual weather. Also included are delays encountered due to submittals, Government Activities, deliveries or work stoppage which makes re-planning the work necessary, and when the schedule does not represent the actual prosecution and progress of the work.

3.7 REQUESTS FOR TIME EXTENSIONS

In the event the Contractor requests an extension of the contract completion date, he shall furnish such justification, project schedule data and supporting evidence as the Contracting Officer may deem necessary for a determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof of delay, based on revised activity logic, duration, and costs (updated to the specific date that the delay occurred) is obligatory to any approvals.

3.7.1 Justification of Delay

The project schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved with this request. The Contracting Officer's determination as to the number of allowable days of contract extension, shall be based upon the project schedule updates in effect for the time period in question and other factual information. Actual delays that are found to be caused by the Contractor's own actions, which result in the extension of the schedule, shall not be a cause for a time extension to the contract completion date.

3.7.2 Submission Requirements

The Contractor shall submit a justification for each request for a change in the contract completion date of under two weeks based upon the most recent schedule update at the time of the Notice to Proceed or constructive direction issued for the change. Such a request shall be in accordance with the requirements of other appropriate Contract Clauses and shall include, as a minimum:

- a. A list of affected activities, with their associated project schedule activity number.
- b. A brief explanation of the causes of the change.
- c. An analysis of the overall impact of the changes proposed.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- d. A sub-network of the affected area.

Activities impacted in each justification for change shall be identified by a unique activity code contained in the required data file.

3.7.3 Additional Submission Requirements

For any request for time extension for over 2 weeks, the Contracting Officer may request an interim update with revised activities for a specific change request. The Contractor shall provide this disk within 4 days of the Contracting Officer's request.

3.8 DIRECTED CHANGES

If Notice to Proceed (NTP) is issued for changes prior to settlement of price and/or time, the Contractor shall submit proposed schedule revisions to the Contracting Officer within 2 weeks of the NTP being issued. The proposed revisions to the schedule will be approved by the Contracting Officer prior to inclusion of those changes within the project schedule. If the Contractor fails to submit the proposed revisions, the Contracting Officer may furnish the Contractor suggested revisions to the project schedule. The Contractor shall include these revisions in the project schedule until the Contractor submits revisions, and final changes and impacts have been negotiated. If the Contractor has any objections to the revisions furnished by the Contracting Officer, then the Contractor shall advise the Contracting Officer within 2 weeks of receipt of the revisions. Regardless of the objections, the Contractor will continue to update their schedule with the Contracting Officer's revisions until a mutual agreement in the revisions may be made. If the Contractor fails to submit alternative revisions within 2 weeks of receipt of the Contracting Officer's proposed revisions, the Contractor will be deemed to have concurred with the Contracting Officer's proposed revisions. The proposed revisions will then be the basis for an equitable adjustment for performance of the work.

3.9 OWNERSHIP OF FLOAT

Float available in the schedule, at any time, shall not be considered for the exclusive use of either the Government or the Contractor.

---End of Section---

FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK

SECTION 01330

SUBMITTAL PROCEDURES
DESIGN/BUILD CONSTRUCTION
(NY Dist Rev. 8/01)

PART 1 GENERAL

1.0 SUMMARY

This section covers procedures to be used in making submittals for construction. The Contractor's Quality Control Representative shall coordinate and control submittals.

1.1 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.1.1 Design Submittals

Administrative Contracting Officer review is required for all design. The Government will review all 75% and 95% design submittals for conformance with the technical requirements of the solicitation. Section 01012, Design After Award, covers the design submittal and review process in detail.

1.1.2 Construction Submittals

1.1.2.1 Submittal Definitions

The submittals described below are those required and further described in other sections of the specifications. Submittals required by the CONTRACT CLAUSES and other non-technical parts of the contract are not included in this section.

SD-01 Data

Work to be Performed by Contractor

Submittal Registers

Submittals which provide calculations, descriptions, or documentation regarding the work.

SD-04 Drawings

Submittals which graphically show relationship of various components of the work, schematic diagrams of systems, details of fabrication, layouts of particular elements, connections, and other relational aspects of the work.

As-Built Drawings

Equipment Layout Drawings

FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK

SD-06 Instructions

Preprinted material describing installation of a product, system or material, including special notices and material safety data sheets, if any, concerning impedances, hazards, and safety precautions.

SD-07 Schedules

Progress Schedules

Schedules for Construction Contracts

Contractor Prepared Network Analysis

Tabular lists showing location, features, or other pertinent information regarding products, materials, equipment, or components to be used in the work.

SD-08 Statements

Accident Prevention Plan

Hazard Analysis Plan

Environmental Protection Plan

Submittal Procedures

A document, required of the Contractor, or through the Contractor, from a supplier, installer, manufacturer, or other lower tier Contractor, the purpose of which is to confirm the quality or orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel, qualifications, or other verifications of quality.

SD-09 Reports

Reports of inspections or tests, including analysis and interpretation of test results. Each report shall be properly identified. Test methods used shall be identified and test results shall be recorded.

SD-13 Certificates

Statements signed by responsible official of a manufacturer of a product, system or material, attesting that the product, system or material meets specified requirements.

SD-14 Samples

Samples including both fabricated and unfabricated physical examples of products, and units of work as complete units or as portions of units of work.

SD-18 Records

Documentation to record compliance with technical or administrative requirements.

SD-19 Operation and Maintenance Manuals

Data which forms a part of an operation and maintenance manual.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

1.1.2.2 Designer of Record Approval.

Designer of Record approval is required for extensions of design, critical materials, any deviations from the solicitation, the accepted proposal, or the completed design, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer's Representative. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "shop drawings". The Contractor shall also provide the Government the number of copies designated hereinafter of all Designer of Record approved submittals. The Government may review any or all Designer of Record approved submittals for conformance to the Solicitation and Accepted Proposal. The Government will review all submittals designated as deviating from the Solicitation or Accepted Proposal, as described below.

1.1.2.3 Government Approved Construction Submittals.

Administrative Contracting Officer approval is required for any deviations from the Solicitation or Accepted Proposal and other items as designated by the Contracting Officer's Representative.

1.1.2.4 Government Reviewed Extension of Design.

Government review is required for extension of design construction submittals, used to define contract conformity, and for deviation from the completed design. Review will be only for conformance with the contract requirements. Included are only those construction submittals for which the Designer of Record design documents do not include enough detail to ascertain contract compliance. Government review is not required for extensions of design such as structural steel or reinforcement shop drawings.

1.1.2.5 Information Only.

All submittals not requiring Designer of Record or Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.2 GOVERNMENT REVIEWED OR "APPROVED" SUBMITTALS

The Contracting Officer's Representative conformance review or approval of submittals shall not be construed as a complete check, but will indicate only that the design, general method of construction, materials, detailing and other information appear to meet the Solicitation and Accepted Proposal. Government Review or approval will not relieve the Contractor of the responsibility for any error which may exist, as the Contractor, under the Design and CQC requirements of this contract, is responsible for design, dimensions, all design extensions, such as the design of adequate connections and details, etc., and the satisfactory construction of all work. After submittals have been reviewed for conformance or approved, as applicable, by the Contracting Officer' Representative, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.3 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer's Representative, obtain the Designer of Record's approval, when applicable, and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. Any "information only" submittal found to contain errors or unapproved deviations from the Solicitation or Accepted Proposal shall be resubmitted as one

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

requiring "approval" action, requiring both Design of Record and Government approval. If the Contractor considers any correction indicated by the Government on the submittals to constitute a change to the contract, it shall promptly provide a notice in accordance with the Section 00700 Contract Clauses "Changes" to the Contracting Officer's Representative.

1.4 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made if all required Design of Record or required Government approvals have not been obtained. No payment will be made for any materials incorporated into the work for any conformance review submittals or information only submittals found to contain errors or deviations from the Solicitation or Accepted Proposal.

PART 2 PRODUCTS

2.1 DESIGN SUBMITTALS

The Contractor shall make design submittals in accordance with Section 01012 entitled "DESIGN AFTER AWARD".

2.2 CONSTRUCTION SUBMITTALS

2.2.1 General

The Contractor shall make submittals as required by the specifications. The Contracting Officer's Representative may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, the Contractor's Quality Control (CQC) representative, and the Designer of Record, as applicable, above shall check, approve and stamp, sign, and date each item, indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor's, manufacturer's, or fabricator's drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer's Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

2.2.2 Submittal Register (ENG Form 4288)

The Contractor's Designer(s) of Record shall develop a complete list of submittals during design. The Designer of Record shall identify required submittals in the specifications. The contractor shall generate and update the ENG Form 4288 Submittal Register. If QCS is used on this project the submittal register is required to be entered and updated in QCS. If not, and specifications used are in Specs-In-Tact format, the submittal register shall be generated using the Spec-in-Tact program, and updated using the electronic files exported from Specs-in-Tact. If neither RMS nor Specs-in-Tact are used, the contractor shall generate and update the submittal register electronically in another program.

The Submittal register will be included in the 95% design submittal. The list may not be all inclusive and additional submittals may be required by other parts of the contract. The

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

Contractor is required to complete ENG Form 4288 (including columns "a" through "r") and submit to the Contracting Officer for approval within 30 calendar days after approved date of beginning of construction. The approved submittal register will serve as a scheduling document for submittals and will be used to control submittal actions throughout the contract period. The submit dates and need dates used in the submittal register shall be coordinated with dates in the Contractor prepared progress schedule. Updates to the submittal register showing the Contractor action codes and actual dates with Government action codes and actual dates shall be submitted monthly or until all submittals have been satisfactorily completed. When the progress schedule is revised, the submittal register shall also be revised and both submitted for approval.

2.2.3 Scheduling

Contractor shall schedule those submittals covering component items forming a system or items that are interrelated to be coordinated and submitted concurrently. Also, schedule Certifications to be submitted with the pertinent drawings. Allow adequate time (a minimum of 30 calendar days exclusive of mailing time) and indicate on the register for Government review or approval. No delay damages or time extensions will be allowed for time lost in late submittals.

2.2.4 Transmittal Form (ENG Form 4025)

The transmittal form (ENG Form 4025) shall be for transmitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. The Government will furnish blank forms to the Contractor. Properly complete this form by filling out all the heading blank spaces and identifying each item submitted. Exercise special care to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

2.2.5 Submittal Procedure

Make submittals as follows:

2.2.5.1 Procedures

At the Quality Control Coordination meeting, or pre-work conference, the Contractor shall ascertain the name and address of each individual, agency, or firm who is designated to normally receive items for approval, for information or samples. The contractor shall complete ENG Form 4025, entering each item requiring a separate approval action as a separate item on the form, for each transmittal. A transmittal may consist of one or more 4025 sheets. The transmittal, consisting of ENG Form 4025 plus all applicable submittals, is then sent to the appropriate individual. On critical items the Contractor is encouraged to confirm receipt via telephone. The Contractor shall submit to the Government four copies of submittals for approval or conformance review and one for items for information.

2.2.5.2 Deviations

On submittals for which the Contractor requests proposed deviations, check the column "variation" of ENG Form 4025. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. As stated above, the Contractor's Designer of Record's approval is required for any proposed deviation. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK

2.2.6 Control of Submittals

The Contractor shall carefully control its procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register" so the material needed date is complied with.

2.2.7 Government Conformance Review and Approved Submittals

Upon completion of review of submittals requiring Government approval, the Government will identify the submittals as having received approval by so stamping and dating. The Contracting Officer's Representative will retain 2 copies of the submittal and return 2 copies of the submittal to the Contractor. If the Government performs a conformance review of other Designer of Record approved submittals, the submittals will be so identified and returned, as described above.

2.2.8 Information Only Submittals

Normally the Government will not return submittals for information only. No action of the Contracting Officer's Representative is required on information only submittals. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications and will not prevent the Contracting Officer's Representative from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

2.2.9 Stamps

Stamps used by the Contractor's Designer of Record and the Contractor's designed Quality Control person on the submittal data to certify that the submittal meets contract requirements shall be similar to the following (use two stamps for submittals reviewed by both):

CONTRACTOR	
(Firm Name)	
___ Approval	
___ Approval with corrections as noted on	
___ submittal data and /or attached sheet(s)	
SIGNATURE:	_____
TITLE:	(<u>DESIGNER OF RECORD</u>)
DATE:	_____

---End of Section---

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

SECTION 01420

SAFETY

1.0 **SAFETY:** The contractor shall comply with all applicable Federal, State, and local safety and occupational health laws and regulations. Applicable provisions of the Corps of Engineers manual entitled Safety and Health Requirements Manual EM 385-1-1, dated 3 September 1996 will be applied to all work under this contract. The referenced manual may be purchased from the Contracting Officer's Representative (COR) at the job site, from the U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328, or via the internet at www.USACE.army.mil.

1.1 **U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385—1-1:** This paragraph applies to contracts and purchase orders that require the Contractor to comply with EM 385-1-1 (e.g. contracts that include the Accident Prevention Clause at FAR 52.236-13 and/or safety provisions). EM 385-1-1 and its changes are available at <http://www.hq.usace.army.mil> (at the HQ homepage, select Safety and Occupational Health and then select Changes to EM). The Contractor shall be responsible for complying with the current edition and all changes posted on the web as set in this solicitation.

2.0 **ACCIDENT PREVENTION PROGRAM:** Within fifteen (15) calendar days after receipt of Notice to Proceed, and at least ten (10) calendar days prior to the Pre-construction Safety Conference, four (4) copies of the Accident Prevention Plan shall be submitted for review and acceptance by the Contracting Officer or the Contracting Officers Representative (COR). The accident prevention program shall be prepared in the format outlined in Appendix A of EM 385-1-1, "Minimum Basic Requirements for Accident Prevention Plan".

3.0 **HAZARD ANALYSIS:** Submit one time with the Accident Prevention Program for each major phase of work, an Activity Hazard Analysis that shall be prepared by the Contractor performing that work, and submitted for review and acceptance. The format shall be in accordance with EM 385-1-1, figure 1-1. A major phase of work is defined as a operation involving a type of work presenting hazards not experienced in previous operations or where a new contractor or work crew is to perform. (See Contractor Quality Control specification for further guidance regarding coordination of "Activities" and "Principal Steps" indicated in the Activity Hazard Analysis with Contractor Quality Control activities). The analysis shall define the activities to be performed and identify the sequence of work, the specific hazards anticipated, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the activity hazard analysis has been accepted and a preparatory meeting has been conducted by the Contractor to discuss its contents with everyone engaged in the activities, including the government on-site representative(s). The activity hazard analyses shall be continuously reviewed and when appropriate modified to address changing site conditions or operations, with the concurrence of the site safety representative, the site superintendent, and the Contracting Officer. Activity hazard analyses shall be attached to and become part of the accident prevention plan.

3.1 Hazard analysis shall be used to identify and evaluate all substances, agents, or environments that present hazards and recommend control measures. Engineering and administrative controls shall be used to control hazards; in cases where engineering or administrative controls are not feasible, personal protective equipment may be used.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

3.2 Information contained in MSDS (Material Safety Data Sheets) shall be incorporated in the hazard analysis for the activities in which hazardous or toxic materials will be used, or generated (e.g. fiberglass, crystalline silica, metal dust or fume, etc.).

4.0 **SITE SAFETY OFFICER:** The contractor shall identify an individual directly employed by the contractor as Site Safety Officer responsible to the Contractor to implement and continually enforce the Accident Prevention Plan. The site safety officer shall not be the same individual as the Quality Control System Manager if the CQC System Manager is required to have no duties other than Quality Control. The site safety officer shall have the authority to suspend operational activities if the health and safety of personnel are endangered, and to suspend an individual from operational activities for infractions of the Accident Prevention Plan.

4.1 Qualifications: The name, qualifications (training and experience) of the designated Site Safety Officer shall be included in the Accident Prevention Plan. The Site safety officer shall have the following qualifications:

- a. A minimum of 5 years construction experience with at least 2 years experience in implementing safety programs at construction work sites for projects of comparable scope and complexity.
- b. Documented experience in construction techniques and construction safety procedures.
- c. Working knowledge of Federal and state occupational health and safety regulations.
- d. Specific training in excavation safety, fall protection, and confined space.
- e. CPR/First Aid certification (current)
- f. Familiarity with and ability to use and implement the Corps of Engineers Safety Manual EM 385-1-1.

4.2 Other Requirements: Other sections of the contract documents may also require separate specially qualified individuals in such areas a chemical data acquisition, sampling and analysis, medical monitoring, industrial hygiene, quality control, etc.

5.0 **SITE INSPECTIONS:** The site safety officer shall perform daily inspections of the job sites and the work in progress to ensure compliance with EM 385-1-1 and to determine the effectiveness of the accident prevention plan. Daily inspection logs shall be used to document inspections noting safety and health deficiencies, deficiencies in the effectiveness of the accident prevention plan, and corrective actions including timetable and responsibilities. The daily inspection logs will be attached to and submitted with the Daily Quality Control Reports or may be incorporated in the daily CQC report. Each entry shall include date, work area checked, employees present in work area, protective equipment and work equipment in use, special safety and health issues and notes, and signature of the preparer.

6.0 **HIGHLIGHTED PROVISIONS:** In addition to those items contained in EM 385-1-1, Appendix A, include the following items in the accident prevention plan:

6.1 Hard Hat Area. A statement that the jobsite is classified a "hard hat" area from start to finish.

6.2 Sanitation and Medical Requirements. Estimate the greatest number of employees, supervisors, etc., to be working at peak construction period, including subcontractor personnel. Include sanitation requirements and medical facilities identified for the job site. If a medical facility or physician is not accessible within five minutes of an injury to a group of two or more employees for the treatment of injuries, identify at least two or more employees on each shift who are qualified to administer first aid and CPR.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

6.3 Equipment Inspection. The type of inspection program on cranes, trucks, and other types of construction equipment the Contractor plans to implement. Who will be responsible for the inspection and how the Contractor will control equipment of sub-contractors and equipment bought to the site by rental companies. Types of records to be kept.

6.3.1 Copies of records of all equipment inspections will be kept at the job site for review by the designated authority.

6.4 Crane & Derrick Operators: Written proof of qualification for all crane and derrick operators in accordance with EM 385-1-1, 16.C.04. Qualification shall be by written (or oral) examination and practical operating examination unless the operator is licensed by a state or city-licensing agency for the particular type of crane or derrick. Proof of qualification shall be provided by the qualifying source.

7.0 **ACCIDENT REPORTS**: The contractor shall immediately report all accidents by telephone to the COR.

7.1 The Contractor will provide an initial written report of the accident to the COR within 24 hours. The Contractor shall complete and submit ENG Form 3394 for all accidents involving lost work time, medical treatment, and/or property damage in excess of \$2000.00 within 48 hours of the accident. The report shall accurately represent the circumstances of the accident, cause of the accident, extent of medical treatment, extent of injuries and steps to prevent occurrence of similar accidents. The hazard analysis covering the work activity being undertaken during the accident shall be attached to the report.

7.2 Daily records of all first aid treatment not otherwise reportable shall be maintained at the job site and furnished to the designated authority upon request. Records shall also be maintained of all exposure and accident experience incidental to the work (OSHA Form 300 or equivalent as prescribed by 29 CFR 1904).

8.0 **MONTHLY EXPOSURE REPORTS**: The Contractor shall submit to the COR no later than the 1st day of each month, a compilation of manhours worked each month by the prime contractor and each subcontractor. In addition, the contractor shall report the number of accidents, severity, class of accidents, and lost time work days for each month.

9.0 **CLEAN-UP**: The Contractor's Accident Prevention Plan shall identify the individual's responsible for cleanup and shall establish a regular housekeeping procedure and schedule. If the COR determines that cleanup is not being performed satisfactorily, the Contractor shall establish a work crew to perform the continuous cleanup required by the contract clause titled: CLEANING UP: The number of individuals appointed to the cleanup work crew shall be increased as required in order to render adequate cleanup.

10.0 **FOCUS AREAS**: To supplement and emphasize the requirements of EM 385-1-1, the following is provided and shall be met as applicable.

10.1 Electrical Work: Electrical work shall not be performed on or near energized lines or equipment unless specified in the plans and specifications and approved by the COR. Plan and layout of proposed temporary power to the construction site shall be submitted and approved by the COR before work will be permitted.

10.1.1 Upon request by the Contractor, arrangements will be made for de-energizing lines and equipment so that work may be performed. All outages shall be requested through the COR a minimum of 14 days, unless otherwise specified, prior to the beginning of the specified outages. Dates and duration will be specified.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

10.2 If approved by the COR, the following work may be performed with the lines energized using certified hot line equipment on lines above 600 volts, when the following conditions have been met:

- a. Work below the conductors no closer than the clearance required in EM 385-1-1 from the energized conductors.
- b. Setting and connection of new pre-trimmed poles in energized lines which do not replace an existing pole.
- c. Setting and removing transformers or other equipment on poles.
- d. Installation or removal of hot line connectors, jumpers, dead-end insulators for temporary isolation, etc., which are accomplished with hot line equipment from an insulated bucket truck.

10.3 Energized Line Work Plan: The Contractor shall submit a plan, in writing, describing his/her method of operation and the equipment to be used on energized lines. Proper certification from an approved source of the safe condition of all tools and equipment will be provided with the plan. The work will be planned and scheduled so that proper supervision is maintained. Emergency procedures, including communication, for disconnecting power in the event of an accident will be outlined in the plan. The Contractor will review his/her plan with the COR prior to being granted permission to perform the work.

10.4 No work on lines greater than 600 volts will be performed from the pole or without the use of an insulated bucket truck.

10.5 No work will be done on overbuilt lines while underbuilt lines are energized, except for temporary isolation and switching.

10.6 Electrical Tools and Cords: Hand held electrical tools shall be used only on circuits protected by ground fault circuit interrupters for protection of personnel. All general use extension cords shall be hard usage or extra hard usage as specified in Table 11-1 of EM 385-1-1. Damaged or repaired cords shall not be permitted.

10.7 Temporary Power: Temporary electrical distribution systems and devices shall be checked and found acceptable for polarity, ground continuity, and ground resistance before initial use and after modification. GFI outlets shall be installed and tested with a GFI circuit tester (tripping device) prior to use. Portable and vehicle mounted generators shall be inspected for compliance with EM 385-1-1 and NFPA 70. All electrical equipment located outdoors or in wet locations shall be enclosed in weatherproof enclosures in accordance with EM 385-1-1. Records of all tests and inspections will be kept by the contractor and made available on site for review by the designated authority. Submit sketch of proposed temporary power for acceptance.

10.8 Rollover Protective Structures (ROPS): Seat belts and ROPS shall be installed on all construction equipment as required by paragraph 16.B.12 of EM 385-1-1. The operating authority will furnish proof from the manufacturer or licensed engineer that ROPS meets the applicable SAE standards cited in EM 385-1-1, pg. 257.

10.9 Radiation Permits or Authorizations: Contractors contemplating the use of a licensed or DOD regulated radiological device or radioactive material on a DOD installation will secure appropriate permit or authorization from the Department of Army or Department of the Air Force, as applicable. A 45-day lead-time should be programmed for obtaining the necessary authorization or permit. When requested, the COR will assist the Contractor in obtaining the required permit or authorization.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

10.9.1 The Contractor shall develop and implement a radiation safety program to comply with EM 385-1-1, Section 06.E. Provisions for leak tests, authorized personnel, transport certificates, etc. will be addressed in the radiation safety program.

10.10 Elevating Work Platforms: All elevating work platforms shall be designed, constructed, maintained, used, and operated in accordance with ANSI A92.3, ANSI A92.6, ANSI A92.5 and EM 385-1-1, Sections 22.J and 16.A.

10.10.1 Only personnel trained in the use of elevating work platforms shall be authorized to use them. A list of authorized users will be maintained by the contractor at the job site. The list will be updated to remain current and made available for review on site by the designated authority. Personnel safety belts must be worn.

10.11 Fall Protection: Fall protection in the form of standard guardrails, nets, or personal fall arrest systems will be provided for all work conducted over 1.8 meters (6 feet) in height The contractor will submit his/her proposed method of fall protection to the COR as part of the Job Hazard Analysis for acceptance. If the contractor deems that conventional fall protection as described above is not feasible, or creates a greater hazard, the Contractor will prepare a written fall protection plan in accordance with OSHA 29 CFR 1926.502(k). The plan will demonstrate the reasons that conventional fall protection is unfeasible or constitutes a greater hazard and will provide alternative safety measures for review and acceptance by the COR.

10.12 Excavations: All open excavations made in the earth's surface four (4) foot or greater will be under the supervision of a competent person trained in, and knowledgeable about, soils analysis, the use of protective systems, and the requirements of OSHA 29 CFR 1926, Subpart P and EM 385-1-1, Section 25. The competent person shall be designated in writing by the Contractor and a resume of their training and experience submitted to the COR for acceptance.

10.12.1 Excavations hazards and methods for their control will be specified in the job hazard analysis.

10.12.2 Sloping and benching: The design of sloping and benching shall be selected from and in accordance with written tabulated data, such as charts and tables. At least one copy of the tabulated data will be maintained at the job site.

10.12..3 Support Systems: shall be in accordance with one of the systems outlined in a through c below:

- a. Designs drawn from manufacturer's specifications and in accordance with all specifications, limitations, and recommendations issued or made by the manufacturer. A copy of the manufacture's specifications, recommendations, and limitations will be in written form and maintained at the job site.
- b. Designs selected from and in accordance with tabulated data (such as tables and charts). At least one copy of the design shall be maintained at the job site during excavation.
- c. Designed by a registered engineer. At least one copy of the design shall be maintained at the job site during excavation.

10.12.4 Excavations Greater than 20 Feet in Height: Sloping and benching or support systems shall be designed by a registered professional engineer. Designs shall be in writing and at least one copy of the design shall be maintained at the job site during excavation. The contractor will ensure that the registered

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

professional engineer is working within a discipline applicable to the excavation work; i.e. it would be inappropriate for an electrical engineer to approve shoring designed for an excavation.

10.13 Confined Space: Entry into and work in a confined space will not be allowed when oxygen readings are less than 19.5% or greater than 23.5% or if the lower explosive limit (LEL) reading is greater than 10%, unless these conditions are adequately addressed in the confined space entry plan. In addition, action levels for toxic atmospheres shall be determined and any other known or potential hazards eliminated prior to entry.

11.0 **LANGUAGE**: For each group that has employees that do not speak English, the Contractor will provide a bilingual foreman that is fluent in the language of the workers. The contractor will implement the requirements of EM 385-1-1, 01.B through these foremen.

12.0 **CONTRACTOR SAFETY MEETINGS AND DOCUMENTATION**: Contractor shall conduct and document safety meetings among its personnel as required by EM 385-1-1 and as indicated herein. Monthly meetings shall be held among all supervisors, and weekly meetings shall be conducted by supervisors or foreman for all workers. The agenda of the meeting shall include specific safety items pertinent to work being performed. Documentation shall include a summary of items discussed as well as other items required by the EM 385-1-1. Documentation shall be submitted to the Government monthly.

13.0 COORDINATION WITH OTHER SPECIFICATION SECTIONS:

The requirements of this section are meant to supplement requirements of other sections. In cases of discrepancies the most stringent requirements shall apply. Other safety-related requirements can be found in the following specification sections:

- a. Specification Section 01451“Contractor Quality Control Design/Build Construction”
- b. Other specifications or contract requirements relating to site safety or health requirement or medical monitoring.

14.0 **CONTRACTOR PERFORMANCE APPRAISAL**: The occurrence of accidents and near misses due to negligence are strong indications that there has been insufficient emphasis on effective implementation and/or commitment to the accident prevention program. Should it become obvious that only lip service is being given to this program, an interim unsatisfactory performance appraisal rating will be issued. If safety continues to be unsatisfactory or marginal, the unsatisfactory rating will become final. The contractor should be aware that this appraisal will be stored in a national computer database which can be accessed by a multitude of agencies or municipalities desiring information on prospective contractors. An unsatisfactory rating in this database may affect the contractor's ability to obtain future Government work.

-End of Section-

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

these individuals. The project QC Manager will be held responsible for the quality of work on the job and is subject to removal by the Contracting Officer for non-compliance with quality requirements specified in the contract. The CQC Manager in this context shall mean the on-site individual with the responsibility for the overall management of the project including logistics and production.

QUALITY CONTROL ORGANIZATION

3.2 General

The Contractor shall furnish for review by the Government, not later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan (Design and Construction) proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan to cover design operations for the first 60 days. The complete CQC plan must then be submitted no later than 60 days after Notice to Proceed. Design and Construction will be permitted to begin only after acceptance of the CQC Plan or interim plan. The Contractor shall provide a CQC organization, which shall have complete authority to take any action necessary to ensure compliance with the contract. All CQC staff members shall be subject to acceptance by the Contracting Officer.

3.2.1 The proposed design team shall, as a minimum, be comprised of the following disciplines: Architect, Civil Engineer, Structural Engineer, Mechanical Engineer, Electrical Engineer, Fire Protection and Geotechnical Engineer. At least one person in a lead role of each discipline must be registered to practice in their professional field of engineering in the United States or its possessions (52.236-0025).

3.2.2 Organizational Expertise

The CQC organization, which includes the CQC System Manager, Project Manager and additional qualified personnel, must as a minimum possess general corporate technical knowledge of all aspects of the project, and must successfully execute the CQC System on all aspects of the project. Individuals possessing experience in specialized areas shall be added to the organization as required during periods when such specialty areas are being executed. Examples of such specialized areas would include but are not limited to Designers of Record, Independent Technical Reviewers, Electrical design, Structural design, Seismic design, Environmental design, Mechanical design, Communications design, Fire protection design, HVAC, electrical distribution and substations, roofing, tele-communication systems, fire protection and alarm systems, computer installations, specialized welding, specialized finishes, precast concrete installation, modular housing, specialized geotech work, dredging, sand placement and surveying, chemical data acquisition, hazardous material removal and disposal, medical monitoring, etc., depending on the nature of the particular project. The Contractor must demonstrate that such additional qualified personnel have received sufficient training and indoctrination into the CQC system, and that these personnel properly execute the requirements of the CQC System within their areas of expertise.

3.2.3 Project Specific Organization

3.2.3.1 Contractor's Quality Control Organization shall meet at a minimum one of the following:

a) The contractor shall employ a minimum of four people 1) CQC Systems Manager (Overall Manager Construction), 2) a Design Quality Control Manager reports to the CQC Systems Manager. These people may have duties other than Quality Control.

3.2.4 Organizational Changes

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

The Contractor shall maintain the CQC Organization at full strength at all times. When it is necessary to make changes to the organization, the Contractor shall revise the CQC Plan to reflect the changes and submit the changes to the Contracting Officer for acceptance.

3.3 QUALITY CONTROL

3.3.1 General

The Contractor shall furnish for review by the Government, not later than 10 days after receipt of notice to proceed, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract Clause titled "Inspection of Construction." and shall implement the requirements of Appendix D, E, F, and G of ER 1110-1-12, Engineering and Design QUALITY MANAGEMENT. The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan to cover design operations for the first 60 days. The complete CQC plan must then be submitted no later than 60 days after Notice to Proceed. Design and Construction will be permitted to begin only after acceptance of the CQC Plan or interim plan.

3.3.2 Design Quality Control (DQC) System

The Contractor shall provide and maintain an effective quality control program which will assure that all design services and products required for construction of this design-build contract are performed and provided in a manner that meets professional architectural and engineering quality standards and the requirements of the contract. The Contractor shall include elements and details of the DQC program in the CQC Plan.

As a minimum, all design documents shall be technically reviewed by competent (Min 5 years experience one person per discipline) independent reviewers identified in the DQC Plan. The same element that produced the product shall not perform the independent technical review (ITR). In the DQC section of the CQC Plan the contractor shall cross-reference the Lessons Learned Databases provided by the Government. As a part of the ITR the team shall hold a coordination meeting for purposes of back check and review, all designers and Independent technical reviewers shall attend.

The Contractor shall correct errors and deficiencies in the design documents prior to submitting them to the Government.

Design Schedule: The procedure for design schedule shall be included in the DQC portion of the CQC Plan. The Contractor shall include the design schedule in the master project schedule, showing the sequence of events involved in carrying out the project tasks within the specific contract period. This should be at a detailed level of scheduling sufficient to identify all major tasks including those that control the flow of work. The schedule shall include review and correction periods associated with each item. This should be a forward planning as well as a project monitoring tool. The schedule must reflect calendar days and not dates for each activity. If the schedule is changed, the Contractor shall submit a revised schedule reflecting the change within seven calendar days. Design schedule shall be coordinated with specification section "Project Schedule".

The Contractor shall include in the DQC portion of the CQC Plan the discipline-specific checklists to be used during the design and quality control of each design submittal. These completed checklists shall also be submitted at each design phase as part of the project documentation. Sample checklists can be found in Corps of Engineers Engineering Regulations ER 1110-1-12, available on the internet.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

DQC shall be implemented by an assigned person with the A/E Firm who has the responsibility of being present during the times design work is in progress shall be cognizant of and assure that all documents on the project have been coordinated and that appropriate submittals of design products are current. This individual shall be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. Contractor shall indicate the name qualifications and responsibility and notify the Contracting Officer, in writing, of the name of the individual and the name of an alternate person assigned to the position.

a. **Professional Accountability:** This is a term specifically developed for this policy statement which represents a level of demonstrated design competency which would be expected of a registered design professional (engineer or architect) operating within acceptable standards as set forth by applicable state registration authority. The definition does not include the concept of design responsibility from a legal standpoint (civil or criminal liability) or design liability from a financial standpoint but does include the concept of design acceptability from a state licensing board's perspective. The concept of professional accountability is used as a measurement of adequate performance for those individuals providing architectural or engineering design functions. This standard does not require professional registration (except for the PE/A) but does require performance that is equivalent to that required of a registered professional.

b. **Quality Certification:** Formally signed certification document attesting to completion of the so-specified QC or QA activities and responsibilities. These will vary depending on how the design is accomplished as described below:

c. **QC Certification For Contractor (AE) Certification –** The A/E's Design Team and the ITRT sign a certificate verifying that the QC process for that product has been completed as described in the QCP. The process also includes the requirement for the Principal of the AE firm, to certify that an independent technical review has been conducted.

d. **QA Audit:** The evaluation of the quality control process and procedures through selective inspection of products, meetings, or production related activities. QA audits of products will not duplicate the technical review. Audits of meetings and inspections will be for the purpose of process improvement and technical oversight.

e. **Seamless Review:** Continual interaction and in-progress reviews made by members of the ITRT during product preparation.

3.3.3 CQC Plan

The CQC plan shall include, as a minimum, the following to cover all design and construction operations, both onsite and offsite, including work by subcontractors, designers of record, consultants, architect/engineer's (A/E's), fabricators, suppliers, and purchasing agents:

a. Details of the DQC system indicated above in Section 3.3.2.

b. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three-phase control system for all aspects of the work specified. The staff shall include a CQC System Manager who shall report to the project manager or someone higher in the Contractor's organization. Project manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

c. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function. Please provide for the following personnel: CQC System Manager, Construction Quality & Design Quality Control Manager, and the Construction Quality Control Manager.

d. A copy of the letter to the CQC System Manager, Construction Manager & Design Quality Control Manager, signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of particular title, including authority to stop work, which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be furnished to the Government.

e. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, designers of record, consultants, A/E's, off-site fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES

f. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. (Laboratory facilities will be approved by the Contracting Officer.) The Contractor shall incorporate all tests required by the contract (including systems commissioning and operating tests) to derive the above list of testing information, which shall be presented in matrix form as part of the CQC Plan. This matrix shall be suitable for use by the Contractor and the Government as a checklist to control testing to be done on the contract. Coordinate any additional test submission or plan requirements for Mechanical and Electrical Systems with appropriate specialized specification section if applicable.

g. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation. Provide matrix of Preparatory and Initial inspections including specification reference paragraph, name of the Definable Feature of Work, and spaces for date performed, results and names of attendees.

h. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.

i. Reporting procedures, including proposed reporting formats. The Contractor shall utilize a Government-furnished software program titled "QCS" (Quality Control System). See specification section QUALITY CONTROL SYSTEM for additional details. Sample forms from QCS will be submitted with CQC Plan.

j. A list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks and has separate control requirements. It could be identified by different trades or disciplines, or it could be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there is frequently more than one definable feature under a particular section. This list will cover all features of work on the project, and will be agreed upon during the coordination meeting.

k. A brief explanation of the duties of the CQC organization with respect to safety. Note that separate Accident Prevention Plan and Hazards Analysis is required for submission and acceptance.

l. Contractor's plan for training all CQC personnel in the CQC System.

3.3.4 Acceptance of Plan

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

Acceptance of the Contractor's plan is required prior to the start of design and/or construction. Acceptance is conditional and will be predicated on satisfactory performance during the design and construction phases. The Government reserves the right to require the Contractor to make changes in his CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.3.5 Notification of Changes

After acceptance of the CQC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.4 COORDINATION MEETING

After the Pre-design Conference, before start of design and/or construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. The CQC Plan shall be submitted for review a minimum of 14 calendar days prior to the Coordination Meeting. The initial plan submitted must be found acceptable by the Government before the Coordination Meeting can be held. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, design activities, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.5 SUBMITTALS

For purposes of this contract, the term submittals refers to both design submittals and shop-drawing type submittals. Submittals shall be made as specified in Section 01330 SUBMITTAL PROCEDURES and as specified in Section 01012 Design after Award. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements and are submitted in accordance with the schedule. CQC personnel shall also make physical checks of materials and equipment before installation to insure compliance with approved shop drawings.

3.6 CONSTRUCTION QUALITY CONTROL

Contractor Quality Control is the means by which the Contractor ensures that the Construction and Design, to include that of the designers, subcontractors, and suppliers, complies with the requirements of the contract. At least three phases of control shall be conducted by the Construction Quality Control Representative for each definable feature of work as follows:

3.6.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work after all required plans/documents/materials are approved/accepted, and after copies are at the worksite, and shall include:

- a. A review of each paragraph of applicable specifications.
- b. A review of the contract drawings.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.
- d. Review of provisions that have been made to provide required control inspection and testing.
- e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.
- f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.
- g. A review of the appropriate activity hazard analysis to assure safety requirements are met per EM 385-1-1, "Safety and Health Requirements Manual".
- h. Discussion of procedures for controlling quality of the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that feature of work.
- i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.
- j. Discussion of the initial control phase.
- k. The Government shall be notified at least 48 hours in advance of beginning the preparatory control phase meeting. This phase shall include a meeting conducted by the Construction Quality Control Representative and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the Construction Quality Control Representative and attached to the daily CQC report. The Contractor shall clearly indicate its intent and plan for communication of the results of the preparatory phase to applicable workers, to include materials, construction methods, workmanship standards, safety considerations and procedures, and preparatory phase meeting minutes.

3.6.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work (DFW) when the accomplishment of a representative sample of the work is impending. The following shall be accomplished:

- a. A check of the portion of work done to ensure that it is in full compliance with contract requirements. Review minutes of the preparatory meeting.
- b. Verify adequacy of controls to ensure full contract compliance. Verify required control inspection and testing.
- c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with required sample panels as appropriate.
- d. Resolve all differences.
- e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

f. The Government shall be notified at least 48 hours in advance of beginning the initial phase meeting. This phase shall include a meeting conducted by the Construction Quality Control Representative and attended by the superintendent, other CQC personnel (as applicable), the foreman responsible for the definable feature and the work crew(s) for the appropriate DFW. Separate minutes of this phase shall be prepared by the Construction Quality Control Representative and attached to the daily CQC report. Exact location (i.e. CQC Report number) of initial phase shall be indicated for future reference and comparison with follow-up phases.

3.6.3 Follow-up Phase

Daily checks shall be performed to assure control activities, including control testing, are providing continued compliance with contract requirements, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work

3.6.4 Additional Preparatory and Initial Phases

Additional preparatory and initial phases shall be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, onsite production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.6.5 Definable Feature of Work: Definition and Discussion

A Definable Feature of Work (DFW) is a portion of work consisting of materials, equipment, supplies and procedures which are closely related to each other, have the same control and will be accomplished by the same work crew to completion. A DFW must be sufficiently small so that control of the work (i.e. communication of requirements to workers, inspection of materials and workmanship and correction of deficiencies) will be easily accomplished.

3.7 TESTS

3.7.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Upon request, the Contractor shall furnish to the Government duplicate samples of test specimens for possible testing by the Government. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a laboratory which has been assurance inspected by the Corps of Engineers within the last two years. The Contractor shall perform the following activities and record and provide the following data:

- a. Verify that testing procedures comply with contract requirements.
- b. Verify that facilities and testing equipment are available and comply with testing standards.
- c. Check test instrument calibration data against certified standards.
- d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

e. Results of all tests taken, both passing and failing tests, will be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an off site or commercial test facility will be provided directly to the Contracting Officer. Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract. The Contractor shall maintain a test log of all tests performed, by type, date, and specification section.

3.7.2 Testing Laboratories

3.7.2.1 Capability Check

The Government reserves the right to check laboratory equipment and calibration in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, aggregate and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329. The Government requires a Corps of Engineers capability check of the laboratory which the contractor proposes to perform tests on soils, concrete, asphalt, aggregate and steel. If the laboratory proposed has not had the required Corps of Engineers capability check within the last two years, it will be performed by the Corps of Engineers at a cost of \$7200 to the Contractor. This cost will be paid by the Contractor via check directly to the Corps of Engineers Laboratory performing the inspection and report.

3.7.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$7200 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory.

3.7.3 On-Site Laboratory

The Government reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.7.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials will be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered to the Corps of Engineers Division Laboratory, as designated by the Government Representative. Coordination for each specific test, exact delivery location and dates will be made through the Area Office.

3.8 COMPLETION INSPECTION

3.8.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Special Clause entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the Construction Quality Control Representative shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The Construction Quality Control Representative or staff shall make a second inspection to ascertain that all deficiencies have been corrected. Once this is accomplished the Contractor shall notify the Government that the facility is ready for the Government's "Pre-final" inspection.

3.8.2 Pre-Final Inspection

The Government will perform this inspection to verify that the facility is complete and ready to be occupied. A Government "Pre-Final Punch List" may be developed as a result of this inspection. The Contractor's Construction Quality Control Representative shall ensure that all items on this list have been corrected before notifying the Government so that a Final inspection with the customer can be scheduled. Any items noted on the Pre-Final inspection shall be corrected in a timely manner. These inspections and any deficiency corrections required by this paragraph shall be accomplished within the time slated for completion of the entire work or an particular increment thereof if the project is divided into increments by separate completion dates.

3.8.3 Final Acceptance Inspection

The Contractor's Quality Control Inspection personnel, plus the superintendent or other primary management person, and the Contracting Officer's Representative shall be in attendance at this inspection. Additional Government personnel including, but not limited to, those from Base/Post Civil Facility Engineer user groups, and major commands may also be in attendance. The final acceptance inspection will be formally scheduled by the Contracting Officer based upon results of the Pre-Final inspection. Notice shall be given to the Contracting Officer at least 14 days prior to the final acceptance inspection and shall include the Contractor's assurance that all specific items previously identified to the Contractor as being unacceptable, along with all remaining work performed under the contract, will be complete and acceptable by the date scheduled for the final acceptance inspection. Failure of the Contractor to have all contract work acceptably complete for this inspection will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection cost in accordance with the contract clause titled "Inspection of Construction".

3.8.4 Post Completion Feedback Meeting and Preparation of Written Minutes

At the completion of this project, the Construction Quality Control Representative will host a meeting to review the project and to discuss lessons learned during the construction of the project. This meeting should be scheduled for 4 hours on-site and should be attended by the Project Manager and representatives of the major subcontractors, including mechanical and electrical. The Contracting Officer and Project Manager will invite members of the government, design and construction team to participate in this meeting.

3.9 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- b. Operating plant/equipment with hours worked, idle, or down for repair.
- c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.
- d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.
- e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.
- f. Submittals reviewed, with contract reference, by whom, and action taken.
- g. Offsite surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/or specifications.
- j. Contractor's verification statement.

These records shall indicate a description of trades working on the project; the number of Personnel working; weather conditions encountered; and any delays encountered. "N/A" shall be entered into any field for which no entry is intended. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 16 hours after the date covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every 7 days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the Construction Quality Control Representative. The report from the Construction Quality Control Representative shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel. All documentation is expected to be literate, legible and complete.

3.9.1 Correspondence

The Contractor shall establish and implement a serialized numbering system for letters sent to the Government. The numbering system shall identify the contract number and shall progress sequentially starting with the number one (1) and continuing thereafter without break in numbering. All letters sent to the Government shall include a subject heading which identifies the Contract Clause Number, Special Clause Number, or Technical Provision Number, and the particular subject item addressed by the letter.

3.10. SAMPLE FORMS

(Note: If the Quality Control System (QCS) is required to be used by the contractor for the QC System as indicated elsewhere in this contract, Contractor will generate all reports in the QCS System, and attached forms will serve as guidance only. Otherwise forms contained herein will be used by the by CQC Staff for CQC System reporting

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- a. The 2-page form at the end of the section will be used for the basic CQC Report. CQC personnel shall attach continuation sheets as required for any entries which cannot fit on the basic form. Preparatory and Initial Inspections, when performed, shall be indicated on the basic CQC report and minutes for each inspection shall be attached. Minutes will consist of a list of specific requirements for materials, procedures or equipment to be employed and shall also include any understandings reached or items of special importance discussed.
- b. In addition, outstanding deficiencies shall be listed on the form "List of Outstanding Deficiencies" at the end of this section and shall be attached to each CQC report. As deficiencies are corrected, they are to be acknowledged on the basic CQC report and shall be deleted from the list.
- c. Form at the end of this section entitled "CQC Test Report List" shall be used by the Contractor to track testing to be done as the project progresses, and also to summarize the Contractor's Quality Control testing to be reported on the CQC Plan.
- d. Form "Record of Preparatory and Initial Inspections" at the end of this section shall be used by the Contractor to track Preparatory and Initial inspections as the project progresses and also to summarize these required inspections as part of the CQC Plan.
- e. Additional reporting forms pertaining to specialized activities may be included herein or elsewhere in the contract, and shall be used for reporting as indicated.

3.11 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor. Deficiencies cited and verbal instruction instructions given to the Contractor by the Government Representative shall be entered into that day's CQC report.

(FORMS FOLLOW)

--- End of Section ---

CQC TEST REPORT LIST

CQC REPORT# _____ SH _____ OF _____

DATE: _____

CONTRACTOR: _____

CONTRACT #: _____

PROJECT TITLE: _____

LOCATION: _____

SPEC REF OR DWG#	TYPE OF TEST	DATE PERFORMED	RESULTS	REMARKS

NOTE: THIS FORM SHALL BE USED BY THE CONTRACTOR TO TRACK CQC TESTING. PROVIDE ATTACHMENTS AS REQUIRED.

LIST OF OUTSTANDING DEFICIENCIES

SH _____ OF _____ DATE: _____

PROJECT TITLE: _____ CONTRACTOR: _____

LOCATION: _____ CQC REPORT# _____ CONTRACT #: _____

SPEC REF OR DWG#	LOCATION ON PROJECT	DESCRIPTION OF DEFICIENCY	DATE FOUND	DATE TO BE CORRECTED	DATE CORRECTED	REMARKS

01451 - 13

NOTE: THIS FORM SHALL BE USED BY THE CONTRACTOR TO TRACK OUTSTANDING CONSTRUCTION DEFICIENCIES

CQC REPORT # _____

Date _____

1. Project Title: _____

Location: _____ Contract No.: _____

2. List Contractors and Subs Working This Day and Areas of responsibility of each

3. Weather: _____

4. Description and Location of Work of the Project (Also indicate days of no work and reasons for delay)

5. Labor and Equipment Breakdown by Trade (Attach Continuation)

6. Preparatory Phase Inspections Held (See Attached Minutes)

7. Initial Phase Inspections Held (See attached minutes)

SECTION 01452

TESTING FOR MECHANICAL AND ELECTRICAL SYSTEMS

NY Dist. Sept. 2003

1. Applicability.

This section applies to all mechanical and electrical systems and all systems using electromagnetically driven equipment, pneumatic or electronic systems; high and low voltage electrical distribution systems (except branch panels) and to any system which incorporates this section into other parts of the specification by reference. For purposes of this section a "system" is an entity comprised of a series of closely related interdependent components and which is capable of independent performance of a useful function. System components shall include all software and programming as applicable for the system. Some typical examples include:

- a. Independently functioning HVAC Systems.
- b. Fire Alarm Systems.
- c. Public Address Systems.
- d. Sprinkler Systems including alarms.
- e. Telephone Systems including line protectors, splices cables, switching equipment, outlets and instruments.
- f. Intrusion Detection System.
- g. High Voltage Equipment including cable, splices, switchgear, relays, circuit breakers, fuses, transformers, instrumentation, etc.
- h. Low Voltage Switchboard including incoming and outgoing feeders, circuit protection and all accessories.

2. Test Plan.

a. Not later than sixty days after Notice to Proceed, in accordance with Section "Submittals" and other paragraphs of the technical provisions, the Contractor shall submit a list for approval consisting of all systems for which test plans are required. This list will be reviewed by the Government and any systems found to be missing will be required to be added by the Contractor, and appropriate test plans submitted. No work will be permitted on any of the above systems until this list is submitted.

b. The Contractor shall develop test plans and schedule operational testing for the systems in the approved list. The testing shall be in accordance with the requirements in the appropriate technical provisions and shall include as a minimum the requirements below. All testing required by applicable codes, standards, utility companies, manufacturers, suppliers, etc. shall be incorporated into the Contractor's test plans. Test plans shall list all equipment required to perform the tests, and any Government support required. It shall be in sufficient detail to permit a step-by step approach to the test and to demonstrate that the systems operate as intended by the contract documents. It shall describe as a

minimum:

1. What system is being tested including a listing of all components to be tested.
 2. What individual or organization will perform testing, who will certify the tests, and qualifications of test personnel.
 3. A step by step narrative of the testing procedure to be used to demonstrate contract compliance including all governing standards, such as "sequence of controls", "ASTM Standard XXX"; or IEEE Standard XXX", etc.
 4. What testing equipment will be utilized.
 5. What operator interaction is required.
 6. What results are to be expected.
 7. Seasonal limitations, if any, including date(s) of proposed testing.
 8. A complete schematic diagram (electrical, pneumatic) showing all components, and block diagram.
 9. A checklist shall be developed to be used during the operational test.
- c. Test plans shall be submitted for approval for all systems contained on the list submitted per para. 2a above. It is also desirable to submit all test plans as soon as possible so that the progress of the project and corresponding payments will proceed on schedule.

3. Testing Process.

a. Outlined below are a number of events relating to the status of the test plan and testing. The corresponding percentages indicate the maximum percentage of the value of the system which will be permitted to be installed after the successful completion of the corresponding event indicated, for all systems to which this section applies. Events must be completed sequentially. Any work performed in excess of the permitted percentages will be at the Contractor's own risk and will not be paid until the event corresponding to the percentage of system value permitted to be installed is successfully completed:

EVENT	MAX. % of SYSTEM VALUE PERMITTED TO BE INSTALLED
1. Contractor has submitted list of systems that require test plans to be approved, and system work is ongoing but no test plan submitted.	50
2. Test Plan Submitted	65
3. *Test Plan Approved	80

4. Successful completion of tests including submission of required documents, reports (i.e. balancing reports for all HVAC Systems), Operation and Maintenance Manuals spare parts, and spare parts data.

* The Government will process the submittal in accordance with the time frames indicated in the specification section "Submittals". If the test plan is disapproved the Government has an additional 30 days to review the resubmittal from the date it receives the resubmittal.

**If a system involves both heating and cooling modes and one mode has been successfully tested this percentage shall be reduced to 90% until the testing is completed.

b. The Contractor may proceed with events as indicated in the above table for each system separately.

4. Operational tests including performance tests shall be conducted for an entire system, not component parts only. Tests may be conducted only after an entire system has been completely installed. Contractor shall provide a minimum of 14 days notice to the Contracting Officer of scheduled tests. This notice must include the Contractor's assurance that all installed work previously identified to the Contractor as being unacceptable along with all remaining work associated with the respective system will be complete and acceptable by the date scheduled for the operational test. Failure of the Contractor to have all contract work acceptably complete for this test will be cause for the Contracting Officer to bill the Contractor for the Government's additional inspection costs.

5. For each system the Contractor shall obtain the services of an experienced professional who shall certify that the operational test was conducted in accordance with the approved test plan and the results of this test meet all the contract requirements. These individuals must have a minimum of eight years experience in the testing of the particular system being tested and shall also meet qualifications (if any) set forth in other technical sections of the contract specifications.

6. For Design-Build projects, the Contractor's Designer of Record for the system shall participate in HVAC System Commissioning.

7. When considering the value of a system for payment purposes the following components shall be counted as part of a "system": All electro-magnetically driven equipment; pneumatic or electric control system; gauges, dampers, valves, actuators, controllers, pipes, test sensing elements, logic/processors, CPU's, ducts, insulation, wiring, conduit, switchgear, and all other mechanical or electrical components, devices or equipment which are essential to the proper function of the system such as pumps, motors, air-handling units, chillers, cooling towers, etc. Software programs and any refrigerants are also considered "parts" of a system.

8. The requirements contained in this section supplement other testing requirements contained in the contract documents. If a conflict exists between the requirements of this section and other parts of the contract documents, the requirements of this section shall take precedence.

--End of Section--

SECTION 01500

TEMPORARY CONSTRUCTION FACILITIES
02/97

1.1 GENERAL REQUIREMENTS

1.1.1 Site Plan

The Contractor shall prepare a site plan indicating the proposed location and dimensions of any area to be fenced and used by the Contractor, the number of trailers to be used, avenues of ingress/egress to the fenced area and details of the fence installation. Any areas which may have to be graveled to prevent the tracking of mud shall also be identified. The Contractor shall also indicate if the use of a supplemental or other staging area is desired.

1.1.2 Identification of Employees

The Contractor shall be responsible for furnishing to each employee, and for requiring each employee engaged on the work to display identification as approved and directed by the Contracting Officer. Prescribed identification shall immediately be delivered to the Contracting Officer for cancellation upon release of any employee. When required, the Contractor shall obtain and provide fingerprints of persons employed on the project. Contractor and subcontractor personnel shall wear identifying markings on hard hats clearly identifying the company for whom the employee works.

1.1.3 Employee Parking

Contractor employees shall park privately owned vehicles in an area designated by the Contracting Officer. This area will be within reasonable walking distance of the construction site. Contractor employee parking shall not interfere with existing and established parking requirements of the military installation.

1.2 AVAILABILITY AND USE OF UTILITY SERVICES

1.2.1 Sanitation

The Contractor shall provide and maintain within the construction area minimum field-type sanitary facilities approved by the Contracting Officer. Government toilet facilities will not be available to Contractor's personnel.

1.2.2 Telephone

The Contractor shall make arrangements and pay all costs for telephone facilities desired.

1.3 BULLETIN BOARD, PROJECT SIGN, AND PROJECT SAFETY SIGN

1.3.1 Bulletin Board

Immediately upon beginning of work, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 by 48 inches in

size for displaying the Equal Employment Opportunity poster, a copy of the wage decision contained in the contract, Wage Rate Information poster, and other information approved by the Contracting Officer. The bulletin board shall be located at the project site in a conspicuous place easily accessible to all employees, as approved by the Contracting Officer. Legible copies of the aforementioned data shall be displayed until work is completed. Upon completion of work the bulletin board shall be removed by and remain the property of the Contractor.

1.3.2 Project and Safety Signs

Place warning signs at the construction area perimeter designating the presence of construction hazards requiring unauthorized persons to keep out. Signs must be placed on all sides of the project, with at least one sign every 90 m or 300 feet. All points of entry shall have signs designating the construction site as a hard-hat area.

1.4 PROTECTION AND MAINTENANCE OF TRAFFIC

During construction the Contractor shall provide access and temporary relocated roads as necessary to maintain traffic. The Contractor shall maintain and protect traffic on all affected roads during the construction period except as otherwise specifically directed by the Contracting Officer. Measures for the protection and diversion of traffic, including the provision of watchmen and flagmen, erection of barricades, placing of lights around and in front of equipment and the work, and the erection and maintenance of adequate warning, danger, and direction signs, shall be as required by the State and local authorities having jurisdiction. The traveling public shall be protected from damage to person and property. The Contractor's traffic on roads selected for hauling material to and from the site shall interfere as little as possible with public traffic. The Contractor shall investigate the adequacy of existing roads and the allowable load limit on these roads. The Contractor shall be responsible for the repair of any damage to roads caused by construction operations.

1.4.1 Haul Roads

The Contractor shall, at its own expense, construct access and haul roads necessary for proper prosecution of the work under this contract. Haul roads shall be constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided. The Contractor shall provide necessary lighting, signs, barricades, and distinctive markings for the safe movement of traffic. The method of dust control, although optional, shall be adequate to ensure safe operation at all times. Location, grade, width, and alignment of construction and hauling roads shall be subject to approval by the Contracting Officer. Lighting shall be adequate to assure full and clear visibility for full width of haul road and work areas during any night work operations. Upon completion of the work, haul roads designated by the Contracting Officer shall be removed.

1.4.2 Barricades

The Contractor shall erect and maintain temporary barricades to limit public access to hazardous areas. Such barricades shall be required whenever safe public access to paved areas such as roads, parking areas or sidewalks is prevented by construction activities or as otherwise necessary to ensure the safety of both pedestrian and vehicular traffic. Barricades shall be

securely placed, clearly visible with adequate illumination to provide sufficient visual warning of the hazard during both day and night.

1.5 CONTRACTOR'S TEMPORARY FACILITIES

1.5.1 Administrative Field Offices

The Contractor shall provide and maintain administrative field office facilities within the construction area at the designated site. Government office and warehouse facilities will not be available to the Contractor's personnel.

1.5.2 Storage Area

The Contracting Officer will designate an area for the Contractor's use and storage of trailers, equipment, and materials. This area may not be in close proximity of the construction site but shall be within the military boundaries. Fencing of materials or equipment will not be required at this site; however the Contractor shall be responsible for cleanliness and orderliness of the area used and for the security of any material or equipment stored in this area. Utilities will not be provided to this area by the Government.

1.5.3 Appearance of Trailers

Trailers utilized by the Contractor for administrative or material storage purposes shall present a clean and neat exterior appearance and shall be in a state of good repair. Trailers which, in the opinion of the Contracting Officer, require exterior painting or maintenance will not be allowed on the military property.

1.5.4 Maintenance of Storage Area

Should the Contractor elect to traverse, with construction equipment or other vehicles, grassed or unpaved areas which are not established roadways, such areas shall be covered with a layer of gravel as necessary to prevent rutting and the tracking of mud onto paved or established roadways; gravel gradation shall be at the Contractor's discretion. Grass located within the boundaries of the construction site shall be mowed for the duration of the project.

1.5.5 Security Provisions

The Contractor shall be responsible for the security of its own equipment; in addition, the Contractor shall notify the appropriate law enforcement agency requesting periodic security checks of the temporary project field office.

1.6 TEMPORARY PROJECT SAFETY FENCING

As soon as practicable, but not later than 15 days after the date established for commencement of work, the Contractor shall furnish and erect temporary project safety fencing at the work site. The safety fencing shall be a high visibility orange colored, high density polyethylene grid or approved equal, a minimum of 42 inches high, supported and tightly secured to steel posts located on maximum 10 foot centers, constructed at the approved location. The safety fencing shall be maintained by the Contractor

during the life of the contract and, upon completion and acceptance of the work, shall become the property of the Contractor and shall be removed from the work site.

1.7 CLEANUP

Construction debris, waste materials, packaging material and the like shall be removed from the work site daily. Any dirt or mud which is tracked onto paved or surfaced roadways shall be cleaned away. Stored material not in trailers, whether new or salvaged, shall be neatly stacked when stored.

1.8 RESTORATION OF STORAGE AREA

Areas used by the Contractor for the storage of equipment or material, or other use, shall be restored to the original or better condition. Gravel used to traverse grassed areas shall be removed and the area restored to its original condition, including top soil and seeding as necessary.

-- End of Section --

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

SECTION 01525

SAFETY REQUIREMENTS
09/00

PART 1 GENERAL

1.1 REFERENCES

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

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A10.14 (1991) Construction and Demolition Operations - Requirements for Safety Belts, Harnesses, Lanyards and Lifelines for Construction and Demolition Use

ANSI Z359.1 (1992) Safety Requirements for Personal Fall Arrest Systems

ASME INTERNATIONAL (ASME)

ASME B30.5 (1994) Mobile Cranes

ASME B30.22 (1993) Articulating Boom Cranes

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

29 CFR 1910.94 Ventilation

29 CFR 1910.120 Hazardous Waste Operations and Emergency Response

29 CFR 1926.65 Hazardous Waste Operations and Emergency Response

29 CFR 1926.502(f) Warning Line Systems

U.S. ARMY CORPS OF ENGINEERS (USACE)

COE EM-385-1-1 (1996) Safety and Health Requirements Manual
<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em385-1-1/toc.htm>

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 10 (1995) Portable Fire Extinguishers

NFPA 70 (1999) National Electrical Code

NFPA 241 (1996) Safeguarding Construction, Alteration, and Demolition Operations

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

1.2 DEFINITIONS

- a. **Competent Person.** A competent person is one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.
- b. **Confined Space.** A space which by design has limited openings for entry and exit, unfavorable natural ventilation which could contain or produce dangerous air contaminants, and which is not intended for continuous employee occupancy. Confined spaces include, but are not limited to storage tanks, process vessels, pits, silos, vats, degreasers, reaction vessels, boilers, ventilation and exhaust ducts, sewers, tunnels, underground utility vaults, and pipelines.
- c. **First Aid.** First aid is any one-time treatment, and any follow-up visit for the purpose of observation, of minor scratches, cuts, burns, splinters, and so forth, which do not ordinarily require medical care, even though provided by a physician or registered professional personnel.
- d. **Lost Workdays.** The number of days (consecutive or not) after, but not including, the day of injury or illness during which the employee would have worked but could not do so; that is, could not perform all or part of his normal assignment during all or any part of the workday or shift; because of the occupational injury or illness.
- e. **Medical Treatment.** Medical treatment includes treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment even though provided by a physician or registered personnel.
- f. **Multi-employer work site (MEWS).** A multi-employer work site, as defined by OSHA, is one in which many employers occupy the same site. The Government considers the prime contractor to be the "controlling authority" for all work site safety and health of the subcontractors.
- g. **Operating Envelope.** There is an "operating envelope" around any crane, and inside the envelope are the operator, riggers, rigging gear between the hook and the load, the load and the crane's supporting structure (ground, rail, etc.).
- h. **Qualified Person.** One who, by possession of a recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience, has successfully demonstrated his or her ability to solve or resolve problems related to the subject matter, the work or the project.
- i. **Recordable Occupational Injuries or Illnesses.** Any occupational injuries or illnesses which result in:
 - (1) Fatalities, regardless of the time between the injury and death, or the length of the illness; or
 - (2) Lost Workday Cases, other than fatalities, that result in lost workdays, or

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- (3) Non-Fatal Cases without lost workdays which result in transfer to another job or termination of employment, or require medical treatment (other than first aid) or involve: loss of consciousness or restriction of work or motion. This category also includes any diagnosed occupational illnesses which are reported to the employer but are not classified as fatalities or lost workday cases.
- j. Safety Officer. The superintendent or other qualified or competent person who is responsible for the on-site safety required for the project. The contractor quality control person cannot be the safety officer, even though the QC has safety inspection responsibilities as part of the QC duties.
- k. Serious Accidents. Any work-related incident, which results in, a fatality, in-patient hospitalization of three or more employees, or property damage in excess of \$200,000.
- l. Significant Accident. Any contractor accident which involves falls of 1.2 m or more, electrical accidents, confined space accidents, diving accidents, equipment accidents, crane accident or fire accidents, which, result in property damage of \$10,000 or more, but less than \$200,000; or when fire department or emergency medical treatment (EMT) assistance is required.
- m. Weight Handling Equipment (WHE) Accident. A WHE accident occurs when any one or more of the six elements in the operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in personnel injury or death; material or equipment damage; dropped load; derailment; two-blocking; overload; and collision, including unplanned contact between the load, crane, and/or other objects. A dropped load, derailment, two-blocking, overload and collision are considered accidents even though no material damage or injury occurs. A component failure (e.g., motor burnout, gear tooth failure, bearing failure) is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components (e.g., dropped boom, dropped load, roll over, etc.).

1.3 SUBMITTALS

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-07 Certificates

Accident Prevention Plan (APP); G

Activity Hazard Analysis (AHA); G

Health and Safety Plan (HASP); G

SD-11 Closeout Submittals

Daily Confined Space Entry Permit

Submit one copy of each permit attached to each Daily Production Report.

Reports

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

Submit reports as their incidence occurs, in accordance with the requirements of the paragraph 1.4.4 entitled, "Reports."

Crane Reports

Crane Critical Lift Plan

Certificate of Compliance

1.4 QUALITY ASSURANCE

1.4.1 Qualifications

- a. Qualifications of Safety Officer:
 - (1) Ability to manage the on-site contractor safety program through appropriate management controls.
 - (2) Ability to identify hazards and have the capability to expend resources necessary to abate the hazards.
 - (3) Must have worked on similar types of projects that are equal to or exceed the scope of the project assigned with the same responsibilities.
 - (4) Shall, as a minimum, have attended an OSHA training qualification class including at least 10 hours of classroom instruction.
- b. Qualifications of Qualified Person, Confined Space Entry. The qualified person shall be capable (by education and specialized training) of anticipating, recognizing, and evaluating employee exposure to hazardous substances or other unsafe conditions in a confined space. This person shall be capable of specifying necessary control and protective action to ensure worker safety.
- c. Qualification of Crane Operators. Crane operators shall meet the requirements in COE EM-385-1-1, Appendix G.

1.4.2 Meetings

1.4.2.1 Prewrite Conference

The safety officer shall attend the prework conference.

1.4.2.2 Weekly Safety Meetings

Hold weekly at the project site. Attach minutes showing contract title, signatures of attendees and a list of topics discussed to the QC Contractor Quality Control daily report.

1.4.2.3 Work Phase Meetings

The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

1.4.2.4 New Employee Indoctrination

New employees will be informed of specific site hazards before they begin work. Documentation of this orientation shall be kept on file at the project site.

1.4.3 Certifications

1.4.3.1 Accident Prevention Plan (APP)

Submit the APP at least 15 calendar days prior to start of work at the job site, following Appendix A of COE EM-385-1-1. Make the APP site specific. Notice of approval to start work will be given after Government finds the APP acceptable.

1.4.3.2 Activity Hazard Analysis (AHA)

The AHA Shall be submitted and accepted as part of the APP at least 15 calendar days prior to the start of each phase. Format subsequent AHA as amendments to the APP. In accordance with contract quality control requirements each AHA will be reviewed during an on-site preparatory inspection.

1.4.4 Reports

1.4.4.1 Crane Reports

Submit crane inspection reports required in accordance with COE EM-385-1-1 and as specified herein with Daily Reports of Inspections.

1.4.4.2 Crane Critical Lift Plan

Submit crane critical lift plan COE EM-385-1-1 section 16 when crane loads meet or exceed 75 percent of the crane load capacity in any configuration.

1.4.4.3 Certificate of Compliance

The Contractor shall provide a Certificate of Compliance for each crane under this contract (see ROICC for a blank certificate). Certificate shall state that the crane and rigging gear meet applicable OSHA regulations (with the contractor citing which OSHA regulations are applicable, e.g., cranes used in construction, demolition, or maintenance shall comply with 29 CFR 1926. Certify on the Certificate of Compliance that the crane operator(s) is qualified and trained in the operation of the crane to be used. The Contractor shall also certify that all of its crane operators working on the base have been trained not to bypass safety device (e.g., anti-two block devices) during lifting operations. These certifications shall be posted on the crane.

1.5 ACCIDENT PREVENTION PLAN (APP)

Prepare the APP in accordance with the required and advisory provisions of COE EM-385-1-1 including Appendix A, "Minimum Basic Outline for Preparation of Accident Prevention Plan," and as modified herein. Include the associated AHA and other specific plans, programs and procedures listed on Pages A-3 and A-4 of COE EM-385-1-1, some of which are listed below.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

1.5.1 Contents of the Accident Prevention Plan

- a. Name and safety related qualifications of safety officer (including training and any certifications).
- b. Qualifications of competent and of qualified persons.
- c. Identity of the individual who will complete exposure data (hours worked); accident investigations, reports and logs; and immediate notification of accidents to include subcontractors.
- d. Emergency response plan. Conform to COE EM-385-1-1, paragraph 01.E and include a map denoting the route to the nearest emergency care facility with emergency phone numbers. Contractor may be required to demonstrate emergency response.
- e. Confined Space Entry Plan. Identify the qualified person's name and qualifications, training, and experience. Delineate the qualified person's authority to direct work stoppage in the event of hazardous conditions. Include procedure for rescue by contractor personnel and the coordination with emergency responders. (If there is no confined space work, include a statement that no confined space work exists and none will be created.)
- f. Hazardous Energy Control Plan. For hazardous energy sources, comply with COE EM-385-1-1, paragraph 12.A.07.
- g. Alcohol and Drug Abuse Plan
 - (1) Describe plan for random checks and testing with pre-employment screening in accordance with the DFAR Clause subpart 252.223-7004, "Drug Free Work Force."
 - (2) Description of the on-site prevention program
- h. Fall Protection and Prevention (FP&P) Plan. The plan shall be site specific and address all fall hazards in the work place. It shall address how to protect and prevent workers from falling to lower levels when they are exposed to fall hazards above 1.8 m. A qualified person shall prepare the plan. The plan shall include fall protection and prevention systems, equipment and methods employed, responsibilities, rescue and escape equipment and operations, training requirements, and monitoring methods. FP&P Plan shall be revised for lengthy projects, to reflect any new changes during the course of construction, due to changes of personnel, equipment, systems or work habits.
- i. Silica Exposure Reduction. The plan shall include specific procedures to prevent employee silica inhalation exposures.
- j. Excavation Plan. The safety and health aspects prepared in accordance with Section 02316, "Excavation, Backfilling, and Compacting for Utilities".
- k. Training Records and Requirements. List of mandatory training and certifications which are applicable to this project (e.g. explosive actuated tools, confined space entry, fall protection, crane operation, vehicle operator, forklift operators, personal protective equipment); list of requirements for periodic retraining/certification; outline requirements for supervisory and employee safety meetings.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- l. Severe Weather Plan. Procedures of ceasing on-site operations during lightning or upon reaching maximum allowed wind velocities.
- m. Emergency Lighting and Power Systems Plan (e.g. periodic testing of batteries for emergency lighting.)

1.5.2 Hazardous Material Use

Each hazardous material must receive approval prior to bringing onto the job site or prior to any other use in connection with this contract. Allow a minimum of 10 working days for processing of the request for use of a hazardous material. Any work or storage involving hazardous chemicals or materials must be done in a manner that will not expose government employees to any unsafe or unhealthful conditions. Adequate protective measures must be taken to prevent government employees from being exposed to any hazardous condition that could result from the work or storage. Approval by the Contracting Officer of protective measures and storage area is required prior to the start of the work.

1.6 ACTIVITY HAZARD ANALYSIS (AHA)

Prepare for each phase of the work. As a minimum, define activity being performed, sequence of work, specific hazards anticipated, control measures to eliminate or reduce each hazard to acceptable levels, training requirements for all involved, and the competent person in charge of that phase of work. For work with fall hazards, including fall hazards associated with scaffold erection and removal, identify the appropriate fall arrest systems. For work with materials handling equipment, address safeguarding measures related to materials handling equipment. For work requiring excavations, include excavation safeguarding requirements. The appropriate AHA shall be reviewed and attendance documented by the Contractor at the preparatory, initial, and follow-up phases of quality control inspection.

1.7 DRUG PREVENTION PROGRAM

Conduct a proactive drug and alcohol use prevention program for all workers, prime and subcontractor, on the site. Ensure that no employees either use illegal drugs or consume alcohol during work hours. Ensure there are no employees under the influence of drugs or alcohol during work hours. After accidents, collect blood, urine or saliva specimens and test injured employee's influence. A copy of the test shall be made available to the Contracting Officer upon request.

1.8 FALL HAZARD PROTECTION AND PREVENTION PROGRAM

1.8.1 Scaffolds

Delineate the fall protection requirements necessary during the erection and dismantling operation of scaffolds used on the project in the Fall Protection and Prevention (FP&P) plan and activity hazard analysis for the phase of work.

1.8.2 Training

Institute a fall protection training program. As part of the Fall Hazard Protection and Prevention Program, Contractor shall provide training for each employee who might be exposed to fall hazards.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

1.9 DUTIES OF THE SAFETY OFFICER

- a. Ensure construction hazards are identified and corrected.
- b. Maintain applicable safety reference material on the job site.
- c. Maintain a log of safety inspections performed.
- d. Attend the pre-construction conference as required.
- e. Identify hazardous work conditions and take corrective action. Failure to do so will result in a dismissal from the site, with a work stoppage pending approval of suitable replacement personnel.

1.10 DISPLAY OF SAFETY INFORMATION

Display the following information in clear view of the on-site construction personnel:

- a. Map denoting the route to the nearest emergency care facility with emergency phone numbers.
- b. AHA
- c. Confined space entry permit.
- d. A sign indicating the number of hours worked since last lost workday accident.

1.11 SITE SAFETY REFERENCE MATERIALS

Maintain safety-related references applicable to the project, including those listed in the article "References." Maintain applicable equipment manufacturers' manuals.

1.12 EMERGENCY MEDICAL TREATMENT

Contractors will arrange for their own emergency medical treatment. Government has no responsibility to provide emergency medical treatment. However, if emergency medical care is rendered by Army medical services, charges may be billed to Contractor at prevailing rates established in BUMED Instruction 6320.4 series. Reimbursement shall be made by Contractor upon receipt of monthly statement.

1.13 REPORTS

1.13.1 Accident Reports

- a. For recordable occupational injuries and illnesses, the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the Army Contractor Significant Incident Report (CSIR) form and provide to the Contracting Officer within 5 calendar days of the accident. The Contracting Officer will provide a copy of the CSIR form.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- b. For a weight handling equipment accident the Prime Contractor shall conduct an accident investigation to establish the root cause(s) of the accident, complete the WHE Accident Report form and provide to the Contracting Officer within 30 calendar days of the accident. The Contracting Officer will provide a blank copy of the WHE accident report form.

1.13.2 Notification

Notify the Contracting Officer as soon as practical, but not later than four hours, of any accident meeting the definition of Recordable Occupational Injuries or Illnesses or Significant Accidents. Information shall include contractor name; contract title; type of contract; name of activity, installation or location where accident occurred; date and time of accident; names of personnel injured; extent of property damage, if any; and brief description of accident (to include type of construction equipment used, PPE used, etc.).

1.13.3 Monthly Exposure Report

Monthly exposure reporting, to the Contracting Officer is required to be attached to the monthly billing request. This report is a compilation of employee-hours worked each month for all site workers, both prime and subcontractor.

1.13.4 OSHA Citations and Violations

Provide the Contracting Officer with a copy of each OSHA citation, OSHA report and contractor response. Correct violations and citations promptly and provide written corrective actions to the Contracting Officer.

1.13.5 Crane Notification

Notify Contracting Officer at least 15 days prior to bringing any crane equipment on-site so that the contracting officer may arrange for any additional quality assurance spot checks necessary by the government.

1.14 HOT WORK

Prior to performing "Hot Work" (welding, etc.) or operating other flame-producing devices, the Contractor shall request a written permit from the Fire Division. **CONTRACTORS ARE REQUIRED TO MEET ALL CRITERIA BEFORE A PERMIT IS ISSUED.** The Contractor will provide at least two (2) twenty (20) pound extinguishers for normal "Hot Work". All extinguishers shall be current inspection tagged, approved safety pin and tamper resistant seal. It is also mandatory to have a designated FIRE WATCH for any "Hot Work" done at this activity.

- a. Oil painting materials (paint, brushes, empty paint cans, etc.), and all flammable liquids shall be removed from the building at quitting time. All painting materials and flammable liquids shall be stored outside in a suitable metal locker or box and will require re-submittal with non-hazardous materials.
- b. Accumulation of trays, paper, shavings, sawdust, boxes and other packing materials shall be removed from the building at the close of each workday and such material disposed of in the proper containers located away from the building.
- c. The storage of combustible supplies shall be a safe distance from structures.

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- d. Area outside of building undergoing work shall be cleaned of trash, paper, or other discarded combustibles at the close of each workday.
- e. All portable electric devices (saws, sanders, compressors, extension chord, lights, etc.) shall be disconnected at the close of each workday. When possible, the main electric switch in the building shall be deactivated.
- f. When starting work in building or areas, Contractors shall require their personnel to familiarize themselves with the location of the nearest fire alarm boxes and place in memory the emergency Fire Division phone number. **ANY FIRE, NO MATTER HOW SMALL, SHALL BE REPORTED TO THE ROICC/BASE FIRE DIVISION IMMEDIATELY.**

PART 2 PRODUCTS

2.1 CONFINED SPACE SIGNAGE

Provide permanent signs integral to or securely attached to access covers for new permit required confined spaces. Signs wording: "DANGER--PERMIT REQUIRED CONFINED SPACE - DO NOT ENTER -" on bold letters a minimum of 25 mm in height and constructed to be clearly legible with all paint removed. The signal word "DANGER" shall be red and readable from 1.52 m.

PART 3 EXECUTION

3.1 CONSTRUCTION

Comply with COE EM-385-1-1, NFPA 241, the accident prevention plan, the activity hazard analysis and other related submittals and activity fire and safety regulations.

3.1.1 Hazardous Material Exclusions

Notwithstanding any other hazardous material used in this contract, radioactive materials or instruments capable of producing ionizing/non-ionizing radiation as well as materials which contain asbestos, mercury or polychlorinated biphenyls, di-isocyanates, lead-based paint are prohibited. Exceptions to the use of any of the above excluded materials may be considered by Contracting Officer upon written request by Contractor.

3.1.2 Unforeseen Hazardous Material

The design should have identified materials such as PCB, lead paint, and friable and nonfriable asbestos. If material, not indicated, that may be hazardous to human health upon disturbance during construction operations is encountered, stop that portion of work and notify the Contracting Officer immediately. Within 14 calendar days the Government will determine if the material is hazardous. If material is not hazardous or poses no danger, the Government will direct the Contractor to proceed without change. If material is hazardous and handling of the material is necessary to accomplish the work, the Government will issue a modification pursuant to "FAR 52.243-4, Changes" and "FAR 52.236-2, Differing Site Conditions."

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

3.2 PRE-OUTAGE COORDINATION MEETING

Contractors are required to apply for utility outages a minimum of 15 days in advance. As a minimum, the request should include the location of the outage, utilities being affected, duration of outage and any necessary sketches. Special requirements for electrical outage requests are contained elsewhere in this specification section. Once approved and prior to beginning work on the utility system requiring shut down, the Contractor shall attend a pre-outage coordination meeting with the ROICC and the Station Utilities Department to review the scope of work and the lock out/tag out procedures for worker protection. No work will be performed on energized electrical equipment unless proven impassable. Working equipment "hot" must be considered the last option.

3.3 PERSONNEL PROTECTION

3.3.1 Hazardous Noise

Provide hazardous noise signs, and hearing protection, wherever equipment and work procedures produce sound-pressure levels greater than 85 dBA steady state or 140 dBA impulse, regardless of the duration of the exposure.

3.3.2 Fall Protection

Enforce use of the fall protection device designated for each specific work activity in the FP&P plan and/or AHA all times when an employee is on a surface 1.8 m or more above lower levels. Personal fall arrest systems are required when working from an articulating or extendible boom, scissor lifts, swing stages, or suspended platform. Fall protection must comply with ANSI A10.14.

3.3.2.1 Personal Fall Arrest Device

Personal fall arrest device equipment, systems, subsystems, and components shall meet ANSI Z359.1, "Safety Requirements for Personal Fall Arrest Systems". Only a full-body harness with a shock absorbing lanyard or self-retracting lanyard is an acceptable personal fall arrest device. Body belts may only be used as a positioning device system such as steel reinforcing assembly and in conjunction with another fall arrest system. Harnesses shall have a fall arrest attachment, which is a connector, affixed to the body support (usually a D-ring) and specifically designated for attachment to the rest of the system. Only double locking snap hooks and carabiners shall be used. Webbing, straps, and ropes shall be made of synthetic fiber.

3.3.2.2 Fall Protection for Roofing Work

Fall protection controls shall be implemented based on the type of roof being constructed and work being performed. The roof area to be accessed shall be evaluated for its structural integrity including weight-bearing capabilities for the projected loading.

a. Low Sloped Roofs:

- (1) For work within 1.8 m of an edge, on low-slope roofs, personnel shall be protected from falling by use of personal fall arrest systems, guardrails, or safety nets. Safety monitoring system is not adequate fall protection and is not authorized.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- (2) For work greater than 1.8 m from an edge, warning lines shall be erected and installed in accordance with 29 CFR 1926.502(f).
- b. Steep Roofs: Work on steep roofs requires personal fall arrest system, guardrails with toe-boards, or safety nets. This requirement also includes residential or housing type construction.

3.3.2.3 Safety Nets

If safety nets are used as the selected fall protection system on the project, they shall be provided at unguarded workplaces, over water, machinery, dangerous operations and leading edge work.

3.3.2.4 Existing Anchorage

Existing anchorages, used for attachment of personal fall arrest equipment, if to be used by the Contractor, shall be re-certified by the contractor's fall protection engineer (QP).

3.4 SCAFFOLDING

Employees shall be provided with a safe means of access to the work area on the scaffold. Climbing of any scaffold braces or supports not specifically designed for access is prohibited. Stair towers or ladders built into scaffold systems in accordance with USACE EM 385-1-1 Appendix J are required for work platforms greater than 6 m in height. Contractor shall ensure that employees that are qualified perform scaffold erection. Do not use scaffold without the capability of supporting at least four times the maximum intended load or without appropriate fall protection as delineated in the accepted fall protection plan. Minimum platform size shall be based on the platform not being greater in height than three times the dimension of the smallest width dimension for rolling scaffold. Some Baker type scaffolding has been found not to meet these requirements. Stationary scaffolds must be attached to structural building components to safeguard against tipping forward or backward. Special care shall be given to ensure scaffold systems are not overloaded. Outrigger brackets used to extend scaffold platforms on self supported scaffold systems for the storage of material is prohibited. The first tie-in shall be at the height equal to 4 times the width of the smallest dimension of the scaffold base.

3.5 EQUIPMENT

3.5.1 Material Handling Equipment

- a. Material handling equipment such as forklifts shall not be modified with work platform attachments for supporting employees unless specifically delineated in the manufacturer's printed operating instructions.
- b. The use of hooks on equipment for lifting of material must be in accordance with manufacturers printed instructions.

3.5.2 Weight Handling Equipment

- a. Cranes must be equipped with:
 - (1) Load Indicating Devices (LIDs) and a Boom Angle or Radius Indicator,
 - (2) or Load-Moment Indicating Devices (LMIs).

**FUEL TRUCK STORAGE BUILDING
FORT DRUM, NEW YORK**

- (3) Anti-two-block prevention devices.
 - (4) Boom Hoist Hydraulic Relief Valve, Disconnect, or Shutoff (stops hoist when boom reaches a predetermined high angle).
 - (5) Boom Length Indicator (for telescoping booms).
 - (6) Device to prevent uncontrolled lowering of a telescoping hydraulic boom.
 - (7) Device to prevent uncontrolled retraction of a telescoping hydraulic boom.
- b. The Contractor shall notify the Contracting Officer, in advance, of any cranes entering the activity so that necessary quality assurance spot checks can be coordinated.
 - c. The Contractor shall comply with the crane manufacturer's specifications and limitations for erection and operation of cranes and hoists used in support of the work. Erection shall be performed under the supervision of a designated person (as defined in ASME B30.5). All testing shall be performed in accordance with the manufacturers recommended procedures.
 - d. The Contractor shall comply with ASME B30.5 for mobile cranes, and ASME B30.22 for articulating boom cranes.
 - e. The presence of the government safety and health inspectors does not relieve the Contractor of an obligation to comply with all applicable safety regulations. The Government will investigate all complaints of unsafe or unhealthful working conditions received in writing from contractor employees, federal civilian employees, or military personnel.
 - f. Each load shall be rigged/attached independently to the hook/master-link in such a fashion that the load cannot slide or otherwise become detached. Christmas-tree lifting (multiple rigged materials) is not allowed.
 - g. When operating in the vicinity of overhead transmission lines, operators and riggers shall be alert to this special hazard and shall follow the requirements of ASME B30.5 or ASME B30.22 as applicable.
 - h. Crane supported work platforms shall only be used in extreme conditions if the Contractor proves that using any other access to the work location would provide a greater hazard to the workers. Personnel shall not be lifted with a live hoist or friction crane.
 - i. A fire extinguisher having a minimum rating of 10BC and a minimum nominal capacity of 5lb of extinguishing agent shall be available at all operator stations or cabs of cranes. Portable fire extinguishers shall be inspected, maintained, and recharged as specified in NFPA 10, Standard for Portable Fire Extinguishers.
 - j. All employees shall be kept clear of loads about to be lifted and of suspended loads.
 - k. A weight handling equipment operator shall not leave his position at the controls while a load is suspended.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- l. A Contractor Crane Operation Checklist shall be used by the CQC representative during oversight of contractor crane operations (refer to COE EM-385-1-1 Appendix H and ROICC for copies).
- m. Only contractor crane operators who have met the requirements of 29 CFR 1910.94, 29 CFR 1910.120, 29 CFR 1926.65, 29 CFR 1926.502(f), COE EM-385-1-1, ASME B30.5, and ASME B30.22 and other local and state requirements shall be authorized to operate the crane.
- n. Cribbing shall be utilized by the Contractor when performing lifts on outriggers.
- o. The crane hook/block must be positioned directly over the load. Side loading of the crane is prohibited.
- p. A physical barricade must be positioned to prevent personnel from entering the tailswing area of the crane.
- q. A substantial and durable rating chart containing legible letters and figures shall be provided with each crane and securely mounted onto the crane cab in a location allowing easy reading by the operator while seated in the control station.
- r. Certification records which include the date of inspection, signature of the person performing the inspection along with the serial number or other identifier of the crane which was inspected. This record will always be available for review by contracting officer personnel.
- s. Written reports listing the load test procedures utilized along with any repairs or alterations performed on the crane will be available for review by the contracting officer personnel.
- t. Contractor shall certify that all of the crane operators have been trained not to bypass safety devices (e.g. anti-two block devices) during lifting operations.

3.6 EXCAVATIONS

The competent person for excavation performed as a result of contract work shall be on-site when work is being performed in excavation, and shall inspect excavations prior to entry by workers. The competent person must evaluate for all hazards, including atmospheric, that may be associated with the work, and shall have the resources necessary to correct hazards promptly. Prior to digging the appropriate digging permit must be obtained. All underground utilities in the work area must be positively identified by a utility locating service and coordinated with the Fort Drum Public Works Utility Branch. The Contractor must physically verify underground utility locations by hand digging using wood or fiberglass-handled tools when any adjacent construction work is expected to come within three feet of the underground system. If construction is parallel to an existing utility the utility shall be exposed by hand digging every 30 m (100 feet) if parallel within 1500 m of the excavation. Trench and shoring systems must be identified in the accepted safety plan and activity hazard analysis. Extreme care must be used when excavating near direct burial electric underground cables. Trenching machines with digging chain drives shall be operated only when the spotters/laborers are in plain view of the operator. Operator and spotters/laborers shall be provided training on the hazards of the digging chain drives with emphasis on the distance that needs to be maintained when the digging chain is operating. Documentation of the training shall be kept on file in the project site office or trailer.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

3.7 ELECTRICAL

3.7.1 Conduct of Electrical Work

Underground electrical spaces must be certified safe for entry before entering to conduct work. Cable intended to be cut must be positively identified and de-energized prior to performing each cut. Positive cable identification must be made prior to submitting any outage request for electrical systems. Arrangements are to be coordinated with the Contracting Officer and Fort Drum Public Works Utility Branch for identification. The Contracting Officer will not accept an outage request until the Contractor satisfactorily documents that the circuits have been clearly identified. Perform all high voltage cutting remotely. When racking in or live switching of circuit breakers, no additional person other than the switch operator will be allowed in the space during the actual operation. Plan so that work near energized parts is minimized to the fullest extent possible. Use of electrical outages clear of any energized electrical sources is the preferred method. When working in energized substations, only qualified electrical workers shall be permitted to enter. When work requires Contractor to work near energized circuits as defined by the NFPA 70, high voltage personnel must use personal protective equipment that includes, as a minimum, electrical hard hat, safety shoes, insulating gloves with leather protective sleeves, fire retarding shirts, coveralls, face shields, and safety glasses. Insulating blankets, hearing protection, and switching suits may be required, depending on the specific job and as delineated in the Contractor AHA.

3.7.2 Portable Extension Cords

Portable extension cords shall be sized in accordance with manufacturer ratings for the tool to be powered.

3.8 WORK IN CONFINED SPACES

Comply with the requirements in Section 06.I of COE EM-385-1-1. Any potential for a hazard in the confined space requires a permit system to be used.

- a. Entry Procedures. Prohibit entry into a confined space by personnel for any purpose, including hot work, until the qualified person has conducted appropriate tests to ensure the confined or enclosed space is safe for the work intended and that all potential hazards are controlled or eliminated and documented. (See Section 06.I.05 of COE EM-385-1-1 for entry procedures.) All hazards pertaining to the space shall be reviewed with each employee during review of the AHA.
- b. Forced air ventilation is required for all confined space entry operations and the minimum air exchange requirements must be maintained.
- c. Ensure the use of rescue and retrieval devices in confined spaces greater than 1.5 m in depth. Conform to Sections 06.I.09, 06.I.10 and 06.I.11 of COE EM-385-1-1.
- d. Sewer wet wells require continuous atmosphere monitoring with audible alarm for toxic gas detection.
- e. Include training information for employees who will be involved as entrant attendants for the work. Conform to Section 06.I.06 of COE EM-385-1-1.

FUEL TRUCK STORAGE BUILDING FORT DRUM, NEW YORK

- f. Entry Permit. Use ENIFORM 5044-R or other form with the same minimum information for the Daily Confined Space Entry Permit, completed by the qualified person. Post the permit in a conspicuous place close to the confined space entrance.

3.9 CRYSTALLINE SILICA

Grinding, abrasive blasting, and foundry operations of construction materials containing crystalline silica, shall comply with OSHA regulations, such as 29 CFR 1910.94, and COE EM-385-1-1, (Appendix C). The Contractor shall develop and implement effective exposure control and elimination procedures to include dust control systems, engineering controls, and establishment of work area boundaries, as well as medical surveillance, training, air monitoring, and personal protective equipment.

3.10 HOUSEKEEPING

3.10.1 Clean-up

All debris in work areas shall be cleaned up daily or more frequently as necessary. Construction debris may be temporarily located in an approved location, however garbage accumulation must be removed each day.

3.10.2 Dust Control

In addition to the dust control measures required elsewhere in the contract documents dry cutting of brick or masonry shall be prohibited. Wet cutting must address control of water run off.

3.11 ACCIDENT SCENE PRESERVATION

For serious accidents, and accidents involving weight handling equipment, ensure the accident site is secured and evidence is protected remaining undisturbed until released by the Contracting Officer.

3.12 FIELD QUALITY CONTROL

3.12.1 Inspections

Include safety inspection as a part of the daily Quality Control inspections required in Section 01451, "Contractor Quality Control".

3.13 FLAMMABLE AND COMBUSTIBLE LIQUID HANDLING AND STORAGE

3.13.1 Safety Gas Containers

Handling of flammable and combustible liquids shall be in safety containers with flame arresters, with not more than 19 L capacity, having a spring-closing lid and spout cover and designed to safely relieve internal pressures under fire exposures. Flammable and combustible Liquids shall be stored in separate NFPA approved storage cabinets 15 m away from any sources of ignition with suitable NO SMOKING OR OPEN FLAME signs posted in all such areas.

-- End Of Section --