

US Army Corps
of Engineers
Baltimore District

DESIGN CRITERIA AND SPECIFICATIONS

DESIGN-BUILD MARINA/SHORELINE IMPROVEMENTS

**BOLLING AIR FORCE BASE, WASHINGTON,
DC**

REQUEST FOR PROPOSAL **W912DR-04-R-0009**

CONTRACT NO.

DATE **NOV 21, 2003**

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SECTION 01000

ADMINISTRATIVE REQUIREMENTS
01/01

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES for design build:

SD-01 Preconstruction Submittals

Title Evidence

Proof of purchase for equipment and/or materials.

Invoice Copies

Proof of full payment.

Photographs

SD-03 Product Data

Cost or Pricing Data

Proof of actual equipment costs.

Equipment Data

An itemized list of serial/model numbers and equipment installed by the Contractor under this contract.

SD-10 Operations and Maintenance Data

O and M Data

A list of proposed maintenance and instruction manuals that is mainly used for but not limited to customized equipment.

1.2 PROGRESS SCHEDULING AND REPORTING (AUG. 1999)

The Contractor, shall within five days or as otherwise determined by the Contracting Officer, after date of commencement of work, submit for approval a practicable progress schedule showing the manner in which he

intends to prosecute the work. Contractor prepared form shall contain the same information as shown on the attached NADB Form 1153 "Physical Construction Progress Chart" (CENAB-CO-E)

1.2.1 Preparation of Operation and Maintenance (O&M) Manuals

The Contractor shall provide a separate activity for the preparation and submission of all O&M manuals. The associated cost of \$1000 shall be assessed for this activity.

1.3 PAYMENTS TO CONTRACTORS (NOV 1976)

For payment purposes only, an allowance will be made by the Contracting Officer of 100 percent of the invoiced cost of materials or equipment delivered to the site but not incorporated into the construction, pursuant to the Contract Clause entitled "PAYMENTS UNDER FIXED-PRICE CONSTRUCTION CONTRACTS". The Contracting Officer may also, at his discretion, take into consideration the cost of materials or equipment stored at locations other than the jobsite, when making progress payments under the contract. In order to be eligible for payment, the Contractor must provide satisfactory evidence that he has acquired title to such material or equipment, and that it will be utilized on the work covered by this contract. Further, all items must be properly stored and protected. Earnings will be computed using 100% of invoiced value. (CENAB-CO-E)

1.5 IDENTIFICATION OF EMPLOYEES: (OCT 1983)

Each employee assigned to this project by the Contractor and subcontractors shall be required to display at all times, while on the project site, an approved form of identification provided by the Contractor, as an authorized employee of the Contractor/subcontractor. In addition, on those projects where identification is prescribed and furnished by the Government, it shall be displayed as required and it shall immediately be returned to the Contracting Officer for cancellation upon release of the assigned employee and or completion of project. (CENAB)

1.6 PURCHASE ORDER: (SEP 1975)

One readable copy of all purchase orders for material and equipment, showing firm names and addresses, and all shipping bills, or memoranda of shipment received regarding such material and equipment, shall be furnished the appointed Contracting Officer's Representative as soon as issued. Such orders, shipping bills or memoranda shall be so worded or marked that all material and each item, piece or member of equipment can be definitely identified on the drawings. Where a priority rating is assigned to a contract, this rating, the required delivery date, and the scheduled shipping date shall also be shown on the purchase order. At the option of the Contractor, the copy of the purchase order may or may not indicate the purchase price. (CENAB-CO-E)

1.7 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (EFARS 52.0231.5000 (OCT 1995))

(a) This clause does not apply to terminations. See 52.249-5000, Basis for settlement of proposals and FAR Part 49.

(b) Allowable cost for construction and marine plant and equipment in sound workable conditions owned or controlled and furnished by a contractor

or subcontractor at any tier shall be based on actual costs data for each piece of equipment or groups of similar serial and services for which the government can determine both ownership and operating costs from the contractor's accounting records. When both ownership and operating costs can not be determined for any piece of equipment or groups of similar serial or series equipment from the contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP1110-1-8 Construction Equipment Ownership and Operating Expenses Schedule, Region East. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the contracting officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

(c) Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d) (ii) and Far 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-leaseback arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated leasees.

(d) When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the contracting officer shall request the contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet. CENAB-CT/SEP 95 (EFARS 52.231-5000)

1.8 REAL PROPERTY EQUIPMENT DATA: (APR 1975)

At or before the time of completion of the contract, the Contractor shall submit to the Contracting Officer a complete itemized list, including serial and model number where applicable, showing the unit retail value of each Contractor furnished item of mechanical, electrical and plumbing equipment installed by the Contractor under this contract. For each of the items which is specified herein to be guaranteed for a specified period from the date of acceptance thereof, either for beneficial use or final acceptance, whichever is earlier, against defective materials, design, and workmanship, the following information shall be given: the name, address and telephone number of the Subcontractor, Equipment Supplier, or Manufacturer originating the guaranteed item. The list shall be accompanied by a copy of the specific guarantee document for each item which is specified herein to be guaranteed if one had been furnished to the Contractor by the Equipment Supplier or Manufacturer. The Contractor's guarantee to the Government of these items will not be limited by the terms of any manufacturer's guarantee to the Contractor. Baltimore District NADB Form 1019 may be utilized for the itemized listing and will be made available to the Contractor upon request. (CENAB-CO-E)

1.9 O and M DATA: (JUL 1979)

The requirements for furnishing operating and maintenance data and field instruction are specified elsewhere in the specifications. The Contractor shall submit to the Contracting Officer, at a time prior to the 50% project completion time, a list of proposed maintenance and instruction manuals to

be furnished the Government and the scheduled dates of all required field instructions to be provided by Contractor furnished personnel or manufacturer's representatives. All maintenance and instruction manuals must be furnished to the Contracting Officer at least 2 weeks prior to the scheduled dates of any required Contractor furnished field instructions or at least one month prior to project completion if no Contractor furnished field instructions are required. (CENAB)

1.10 FACILITY SECURITY CLEARANCE:

1.10.1 Security Areas

- a. Work to be accomplished under this contract is in a security area.
- b. The Contractor will not be granted unlimited access.
- c. The Contractor shall contact the CCI 5 calendar days in advance of commencement of work to arrange for escorts and become acquainted with security requirements.

1.11 PHOTOGRAPHS

PHOTOGRAPHIC COVERAGE: (SEP 85) The Contractor shall furnish ten each 8" x 10" (commercial grade color photographs of the project (with negatives) to the Contracting Officer. These photographs shall be taken at systematic intervals during the contract where and when directed by the Contracting Officer. Negatives from all of the above photographs shall be given to the Contracting Officer and become the property of the Government. (CENAB-CO)

1.12 PERMITS

The Contractor shall be responsible for obtaining all permits required for the project in accordance with local, State and Federal Regulations. The permits to be obtained by the Contractor shall include, but not be limited to, the permits listed below. After final approvals by the respective state agencies are received, the Contractor will furnish approval letters and permits to the Contracting Officer before the start of construction. The Contractor shall abide by all permit requirements.

- a. Erosion and Sedimentation (E&S) Control Plan.
- b. Stormwater Management (SWM) Plan.
- c. Notice of Intent (NOI) to comply with the General Permit for construction activities in accordance with EPA's National Pollution Discharge Elimination System (NPDES) stormwater management program.

PART 2 PRODUCTS

NOT APPLICABLE

PART 3 EXECUTION

NOT APPLICABLE

ATTACHMENTS:

NADB Form 1153 ("Physical Construction Progress Chart")

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SECTION 01010

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PART 2 PRODUCTS

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SECTION 01010

SUMMARY OF WORK AND BID OPTIONS

09/03

PART 1 GENERAL

1.1 SUMMARY OF WORK

1.1.1 Project Location

The project is located at the Bolling Air Force Base Marina in Washington, D.C. Bolling Air Force Base is bounded by U.S. Interstate 295 to the east and the Potomac River on the west. Base access is off of South Capitol Street, which is located on Exit 2 of U.S. Interstate 295. The Marina is located on the west side of the base and is located off Arnold Boulevard. The Marina provides direct waterway access to the Potomac River.

1.1.2 Project Description

The primary Marina Upgrades and Shoreline Improvements for this contract will include the replacement of an existing concrete boat ramp, rip rap shoreline stabilization, and landscape improvements. Construction may occur concurrently with a portion of the dredging operations by others for removal of the existing silt accumulation within the Marina.

Project shall be completed by May 2004. Contractor is responsible for coordinating work and scheduling with dredging operations by others.

1.2 BID OPTIONS

1.2.1 Base Bid

The base bid for this Design Build contract shall include all design and construction work and exclude work defined under the Bid Options. See Section 01011 - DESIGN CRITERIA and plan RFP-2, for specific requirements. All unsalvageable boat slips shall be removed and disposed of under this contract.

1.2.2 Bid Option 1

Bid Option 1 includes the replacement of the existing center boat slips (Bid Option 1A) and/or the boat slips along the east and north perimeter of the marina (Bid Option 1B). The dredging work of the marina by others will include the relocation of the existing boat slips to accommodate dredging operations. If Bid Option 1 is not executed, the boat slips will be salvaged and moved back in place by others. Existing utility services will also be reconnected by others. Any slips that are unsalvageable shall be removed and disposed of by the Contractor. Should either component of Bid Option 1 be executed, the Contractor shall be responsible for the removal and disposal of the existing slips to be replaced.

1.2.2.1 Bid Option 1A - Replace 48 Center Boat Slips

Refer to plan RFP-2 for location of the Center Boat Slips to be replaced under Bid Option 1A. This work will include the removal and disposal of the existing slips to be replaced. The new slips system will include all access bridges, docks, fingers, electric distribution systems, water conveyance systems, anchoring, and other appurtenances required for a complete slip system. All utilities shall be replaced in their entirety back to the point of connects on land at the base of the bridge.

1.2.2.2 Bid Option 1B - Replace 31 Perimeter Boat Slips

Refer to plan RFP-2 for location of the north and east perimeter Boat Slips to be replaced under Bid Option 1B. This work will include the removal and disposal of the existing slips to be replaced. The new slips system will include all access bridges, docks, fingers, electric distribution systems, water conveyance systems, anchoring, and other appurtenances required for a complete slip system. All utilities shall be replaced in their entirety back to the point of connects on land at the base of the bridge.

1.2.3 Bid Option 2 - Bulkhead Replacement

Refer to plan RFP-2 for location of the Bulkhead to be replaced under Bid Option 2.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

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SECTION 01011

DESIGN CRITERIA

04/02

PART 1 GENERAL

1.1 INTENT AND SCOPE

The intent of this RFP (Request for Proposal) is to provide the information necessary for Final Design Proposal and construction of the proposed Bolling Air Force Base Marina and Shoreline Improvements (Marina Improvements)

1.1.1 Design-Build Contract Definition

The Design-Build contract will include all labor and materials necessary to design and construct the proposed Marina Improvements in accordance with this RFP, and applicable Government Standards and Codes. This includes, but is not limited to site preparation, demolition, abandonment/removal/relocation of utilities, excavation, and construction of the Marina Improvements.

1.1.2 Design Objective

The objective of the RFP, and the final design and construction is to restore the full functionality, safety and aesthetic appeal of the Marina.

1.1.3 Design and Construction Requirements

This RFP defines the minimum design and construction requirements. The Design-Build Contractor is responsible for developing a final design in compliance with this RFP, that is sufficiently complete to acquire the permit for construction, and that provides the facilities meeting the requirements of the intent and scope.

1.1.4 The Design-Build Contractor will be the Designer of Record.

1.2 SUBMITTALS FROM THE RFP DESIGN

1.2.1 Concept Design Documents

The government approved documents in the RFP define the site layout, the subsurface conditions, and the locations and description of improvements required.

1.2.2 Deviations From the RFP and Betterments

See Sectons 00700 and 00800 for clauses covering deviations and betterments.

1.3 MATERIALS OF CONSTRUCTION

1.3.1 Critical materials shall be approved by the Government.

1.3.2 The selection of finish materials and systems shall include consideration of ease of maintenance and low maintenance cost

1.4 TECHNICAL CRITERIA

Technical criteria to be used in the design and construction of this project shall be taken from the most current references at the date of issue of this RFP and shall only be modified as may be described herein. Where conflicts in the criteria of RFP requirements occur, either between this RFP document and the listed criteria or between separate listed criteria, the building codes takes precedence over any conflicts with the RFP, unless the RFP is a more stringent criteria.

In addition to the standards, bulletins and handbooks referenced elsewhere in the RFP, the following general criteria are to be used for the design and construction of the project:

General Criteria

27 CFR 1926, Subpart P, Excavations.

EM 385-1-1, Safety and Health Requirements Manual.

NFPA 780, Standards for the Installation of Lighting Protection Systems.

EM 1110-1-1614, Design of Coastal Revetments, Seawalls, and Bulkheads.

EM 1110-2-2504, Design of Sheet Pile Walls.

EM 1110-2-2906, Design of Pile Foundations.

EM 1110-2-1206, Environmental Engineering for Small Boat Basins.

EM 1110-1-400, Recreation Planning and Design Criteria.

Em 1110-2-1100, Coastal Engineering Manual.

EM 1110-2-1204, Environmental Engineering for Coastal Shore Protection.

EM 1110-2-1615, Hydraulic Design of Small Boat Harbors.

TM 5-822-7, Standard Practice for Concrete Pavements.

EM 1110-3-136, Drainage and Erosion Control.

Shore Protection Manual (SPM), 4th ed., Vols I and II.

EM 1110-2-200, Standard Practice for Concrete for Civil Works Structures.

CW 02215, Geotextiles used as Filters.

1.5 FINAL DESIGN DRAWINGS, SPECIFICATIONS, CALCULATIONS:

1.5.1 The Design/Build Contractor shall prepare complete detailed analyses and calculations supporting the Final Design.

1.5.2 All drawings, specifications, and calculations for the Final Design are to be done in metric units.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 CIVIL

3.1.1 Existing Site Conditions

The proposed project improvements will be located within the Marina outdoor recreation area of Bolling Air Force Base. The 18,000 sq.m. site currently contains 105 wet slips, 214 dry storage spaces, a maintenance area, boat ramp, gasoline station, pump-out station, Marina office, and food/drink services. Five wet slips are not in service due to low water levels. All slips have water service, but only 48 slips have electrical service. Slips in the center of the Marina lack electric service. The existing boat ramp is unsafe due to its steep grade and abrupt dropoff. The eroding shoreline has resulted in unsafe grades, undermining of the existing vegetation and basin siltation. Debris from the Potomac River has resulted in increase siltation, unsanitary conditions, and significant damage to the shoreline, boats and docks. The existing embankment along the perimeter is randomly and intermittently reinforced with inconsistent rubble, broken concrete, wood, and stone, which does not provide an aesthetic appearance. The existing wood bulkhead along the north perimeter of the Marina is currently failing.

3.1.2 Site Preparation

The materials included in the RFP package are the basis of the Designer of Record's Design. The design based on the RFP requirements will be the basis of site preparation.

3.1.3 Shore Stabilization

Limit shoreline stabilization to 150 meters of total improvement length. See drawing for location.

Design riprap stabilization in accordance with EM 1110-2-1614 - Design Of Coastal Revetments, Seawalls, and Bulkheads.

Grade shoreline as necessary to provide 2:1 slope for riprap stabilization.

Protect existing trees where possible. Provide design for toe stability. Graded riprap thickness shall be two times the diameter of the minimum W50 size.

Place geotextile fabric between underlying soil and riprap. Select appropriate fabric to prevent migration of the fine soil particles through voids in the structure in accordance with CW 02215 - Geotextiles Used as Filters. Fabric should withstand seawater, ultraviolet exposure and have adequate strength to withstand puncturing during placement of riprap.

Provide provisions for adequate anchoring and overlapping of fabric for proper installation.

3.1.4 Excavation and Grading

Excavation and Grading shall be performed as required to install the items included in the RFP package. Contractor shall edit Section 02300 - Earthwork of the Unified Facilities Guide Specifications as necessary to cover all earthwork.

3.1.5 Erosion and Sediment Control

Prepare and execute an erosion and sediment control plan in accordance with District of Columbia requirements. Submit to the D.C. Department of Health for review and approval.

3.1.6 Concrete Boat Ramp Replacement

The concrete boat ramp shall be based on EM1110-2-1206-Environmental Engineering for Small Boat Basin and include the following

- a. Demolish and remove existing boat ramp
- b. Relocate existing underground utilities as necessary.
- c. Regrade ramp area at 15 percent slope from 1.2 m (4 feet) below mean low tide to top of ram. Continue at 20 percent slope to end of ramp at 2.1 m (7 feet) below mean low tide.
- d. Dimensions of concrete ramp to be 6.096 m (20 feet) wide and approximately 30 m (100 feet) long.
- e. Provide layer of crushed stone beneath concrete and geotextile fabric between crushed stone and subgrade
- f. Provide rip rap protection at end of ramp to prevent scour at toe of ramp.

3.1.7 Bituminous Concrete Patching

Match existing bituminous concrete section for replacement of disturbed parking lot associated with Boat Ramp replacement construction. All work shall be performed in accordance with the District of Columbia, Department of Highway and Traffic, Standard Specifications for Highways and Structures, 1974 and Supplemental Specifications, June 1981, and Interim Revisions, June 6, 1985.

3.1.8 Site Utilities Water

Site utilities to be extended to the Marina include water and electric power. Provide utility trench repair as necessary for utility installation.

3.1.9 Utility Connections

All connections of utilities to existing services shall be requested in writing and approved in accordance with Section 01050. Existing utility shut-downs, if required, shall be requested in writing and approved in accordance with Section 01050. The Contractor shall assume that utility shut-downs will be required to be performed during evenings or on weekends.

3.1.10 Finish Grading and Landscaping

An allowance of \$10,000 shall be provided for existing tree protection and landscape improvements. The contractor shall provide stabilization, lawn and landscape improvements for all disturbed operations, including adjacent transition areas. Provide sod for areas with slopes in excess of 3:1. Provide native plantings to improve overall aesthetics of Marina facility in accordance with Bolling AFB standards.

3.2 BOAT SLIP SYSTEM

The new boat slips shall consist of the following:

- a. Docks shall be 6 feet wide. Fingers shall be 3 feet wide, and bridges shall be 4 feet wide.
- b. New slip systems shall consist of floats constructed of bonded low absorption polystyrene encased with seamless virgin polyethylene. Floats shall be resistant to marine life, petroleum products, and ultraviolet light. Slip system shall be manufactured by Atlantic-Meeco or approved equivalent.
- c. Deck material shall be Treated Southern Yellow Pine.
- d. Galvanized metal deck mounted cleats.
- e. Heavy duty vinyl corner bumpers extruded from high grade marine vinyl with ultraviolet and fungicide protection.
- f. Heavy duty side mounted bumpers extruded from flexible PVC with ultraviolet and fungicide protection.
- g. Concealed utility raceway.
- h. Galvanized telescoping pipe anchor system.
- i. Utility pedestals with water, electric service and built in light. Utility pedestals shall be manufactured by Will - Burt Company or an approved equivalent.

3.3 STRUCTURAL

3.3.1 General

The proposed structural improvements to the Bolling Air Force Base Marina shall include the demolition of the existing wood bulkhead along the north perimeter of the Marina and the construction of a new tied back steel sheet pile bulkhead.

3.3.2 Quality Assurance

The design of all structures and foundations shall be based on the latest edition of the following codes and standards:

ACI-318M American Concrete Institute Building Code
Requirement for Reinforced Concrete

AISC 9th Edition American Institute of Steel Construction
Specification for the Design, Fabrication and Erection of
Structural Steel

EM1110-2-2504 Design of Sheet Pile Walls

EM1110-8-2906 Design of Pile Foundations)

3.3.3 Bulkhead Design Criteria

The new steel sheet pile bulkhead shall be designed based on referenced manuals and the following:

- a. The bulkhead shall be designed for the soil loads in the geotechnical report with ground water behind the bulkhead three feet below grade and the water level in front of the bulkhead at extreme low tide.
- b. The bulkhead shall be designed for surface loads represented by a uniform two foot surcharge.
- c. The steel sheet piling shall be coated from three feet below the mud line to the top with a high build two component polyamid cured modified epoxy product
- d. The top of the bulkhead shall have a reinforced concrete cap and galvanized steel guardrail three foot six inches above grade.

3.4 MECHANICAL

3.4.1 General

The proposed mechanical improvements to the Bolling Air Force Base marina shall include extension of water service to all edge and floating center boat slips. All materials to meet applicable ASTM - American Society for Testing Materials Standard.

3.4.2 Water

Provide flexible hose, FDA approved and suitable for potable water and connect to existing 10" water main at each pier entrance with flexible, detachable connections (a total of 10 connections). Contractor shall verify all locations, flow requirements, and sizes. Water line to be run through utility raceway with Type L copper pipe connections provided for connection to utility pedestal. Utility pedestals are to be located one for every two boats and shall be provided with two 3/4 inch hose bibs each.

Install vacuum breaker type backflow preventer on each hose connection. Contractor is responsible for determining adequacy of water pressure for water service upgrades. See appendix for fire flow test results.

3.5 ELECTRICAL

3.5.1 Scope of Work

Provide complete and functioning electrical systems for the Bolling Air Force Base Marina. All installations shall be complete, operating and tested unless specifically stated otherwise in this document. Coordinate all electrical and control wiring requirements with other trades. Include all installation accessories, mounting hardware, equipment pads, grounding,

and terminations required for an occupied, operating, safe and code compliant facility.

The scope of this project consists of complete installation of all required electrical systems removal of existing electrical outlets and panel boards, secondary distribution, grounding, exterior lighting, and power connections for ship to shore power outlets, and conduit and cable system for power distribution.

Provide complete design drawings and specifications for the entire electrical system for approval by the Government.

3.5.2 General

Calculations: Provide load calculations, feeder and voltage drop calculations to support electrical design.

3.5.2.1 Cathodic Protection is not included in the project.

3.5.2.2 Design Criteria

A/E Guidance	Baltimore District COE A/E Design Guide
ANSI C2	National Electrical Safety Code 2002
NFPA 70	National Electrical Code 2002
NFPA 101	Life Safety Code
NFPA 303 Boatyards	Fire Protection Standard for Marinas and
TI 800-01	20 July 1998 Design Criteria
TM 5-811-1	Electric Power Supply and Distribution
TM 5-811-14	Coordinated Power Systems Protection
	Installation Information Infrastructure Architecture (13A) Design and Implementation Guide

3.5.3 Electrical Service

3.5.3.1 Existing Conditions:

The existing marina contains 105 slips. At the present time electric ship to shore power is available at 48 of the slips. The existing center floating pier has no electrical service outlets. An electric shed located at the walkway to the pier provides electric service to the Marina.

3.5.3.2 Power Distribution System for Center Floating Pier Perimeter Slips

Power to existing slips is by way of existing panels located in shed near Marina office trailer. Remove existing panels and provide new to serve new utility pedestals and existing outlets on west side of Marina. Provide conduit and conductors to required location of pedestals. On access walkways of floating piers, provide flex-type connection. Connect each

pedestal at 120 volt, 1 phase. Provide panelboards with main and branch circuit breakers as required. Provide separate photo-cell switched circuit for lights in utility pedestals with manual over-ride switch.

- a. Marina Power Pedestal: A complete factory-assembled and prewired unit specifically constructed for marina applications. Power center shall be pedestal mounted type for ship to shore service having a separate circuit breaker for each outlet. Circuit breaker size shall be the same size as outlet to which it is connected. Power outlets shall be single, locking and grounding type. Each pedestal shall contain 2- 30 ampere and 2 - 20 ampere, GFI protected, 120 volt, or 2- 20 ampere, 120 volt outlets, GFI protected. Power center enclosure shall be polycarbonate foamed thermoplastic with UV resistant polyurethane coating. Each individual outlet and circuit breaker enclosure shall have a separate gasketed weatherproof cover. Receptacle cover shall be weatherproof-in-use design. Entire exterior surface of power center shall be NEMA 3R nonmetallic design for exposure to saltwater environment. Provide fluorescent lighting and 2 hose bibs for water service at each pedestal location. Provide separate circuits for lights and convenience outlets.

3.5.4 Pier Lighting

Provide single photocell to control pedestal lighting fixtures. Circuit shall have manual over-ride switch for testing lamps.

3.5.5 Power

3.5.5.1 Raceway System

Raceway types will be Rigid Nonmetallic Conduit (RNC) Schedule 80.

- a. Use RNC for all raceways mounted on pier.

3.5.5.2 Conductor Types

- a. Secondary conductors will be 600 volts, copper, type THWN insulation, unless otherwise indicated.
- b. Conductor size will be minimum #12 AWG, copper for power circuits and #14 for control circuits. Increase size as required for voltage drop and derating.
- c. Provide insulated equipment grounding conductor for all feeders and branch circuits.

3.5.5.3 Panelboards

All panelboards will be provided with copper bus. Provide ground bus in all panels. Breakers will be bolt on type. Series rating of panelboards will not be acceptable. Enclosures will be NEMA 3R for outdoor applications.

3.5.5.4 Voltage Drop

- a. Branch Circuits: 3 percent maximum.
- b. Motor Circuits: 5 percent maximum.

- c. Combined Feeder Plus Branch Circuits: 5 percent maximum.

3.5.5.5 Fluorescent lighting ballasts will be electronic, with total harmonic distortion (THD) less than 20%.

3.5.5.6 Compact fluorescent lamps will be provided as required.

3.5.6 Grounding System

The grounding system will comply with NFPA 70 National Electrical Code, 2002, as a minimum design standard. No conduit will be used for the purpose of grounding.

3.5.6.1 Provide a separate equipment grounding conductor for the following:

- a. Lighting Circuits
- b. Receptacle Branch Circuits.
- c. Feeders.
- d. Miscellaneous equipment circuits.

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SECTION 01012

DESIGN AFTER AWARD
07/03

PART 1 GENERAL

THE CONTRACTOR SHALL PAY SPECIAL ATTENTION TO SECTIONS 00700 AND 00800 OF THE CONTRACT FOR CONTRACT CLAUSES AND INFORMATIONAL TEXT REGARDING THIS DESIGN-BUILD CONTRACT.

The Contractor shall schedule the number and composition of the design submittal phases and include that information in the progress charts. Design submittals are required at the, concept (30%), preliminary (50%), final (95%) and design complete (100%) stages. The requirements of each design stage are listed hereinafter.

1.1 DESIGNER OF RECORD

All design disciplines shall be accounted for by registered Designers of Record (DOR). DOR shall be responsible for ensuring integrity of their design and design integration in all construction submittals and extensions to design developed by others, such as the constructor, subcontractors or suppliers. DOR shall review and approve all construction submittals and extensions of design, in accordance with the procedures, described in Section 01330 SUBMITTALS PROCEDURES FOR DESIGN BUILD. The DOR shall stamp, sign, and date all final design drawings under their responsible discipline.

1.2 SEQUENCE OF DESIGN-SUBMITTALS

Fast track construction start is permitted by this contract.

1.3 QUANTITY OF DESIGN SUBMITTALS

The documents that the Contractor shall submit to the Government for each submittal are listed and generally described hereinafter. Unless otherwise indicated, the Contractor shall submit twenty five (25) copies of each item required at each Review Submittal stage. All drawings for interim review submittals shall be half-size. At the Design Complete Submittal, the Contractor shall submit copies of documents and data in accordance with subparagraph "Design Complete (100%) Submittal".

1.4 DELIVERY OF DESIGN SUBMITTALS

After award of the contract the Government will furnish the Contractor separate addresses where design submittals shall be delivered. Each delivery 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.

1.5 COORDINATION

1.1.5.1 Written Records

The contractor shall prepare a written record of each design site visit, meeting, or conference, either telephonic or personal, and furnish the record within seven (7) calendar days to the Contracting Officer and all parties involved. The written record shall include subject, names of participants, outline of discussion, and recommendation or conclusions. The written records shall be numbered in consecutive order.

1.5.2 Design Needs List

Throughout the life of this contract the Contractor shall furnish the Contracting Officer a biweekly "needs" list for design related items. This list shall itemize design data required by the 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. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved.

1.6 GOVERNMENT REVIEW COMMENTS

Within five (5) days after Notice to Proceed, the Contractor shall submit, for approval, a complete design schedule with all submittals and review times indicated in calendar days. Generally, the Contractor shall update this schedule monthly. However, the contractor shall provide the government a minimum advance notice of fourteen (14) calendar days of any changed submittal dates. Corps of Engineers' project reviews are performed using DrChecks, a web-based review management system (<http://www.projnet.org>). The contractor companies must register in DrChecks in preparation for the review process. The contractor shall coordinate with the Government for registration assistance.

Upon receipt of a submittal, the Government shall do a cursory check of quality and quantity. If a design submittal is lacking, it will be returned for correction and resubmission. The review time will begin when the corrected submittal is received. If an otherwise satisfactory design submittal is over one (1) day late in accordance with the latest design schedule, the Government review period may be extended up to seven (7) days.

After satisfactory submittal receipt, the Government will be allowed fourteen (14) days to review and comment on each concept (30%), preliminary (50%) design submittal and twenty-one (21) days to review and comment on the final (95%) design submittal, except as noted below. For each design review submittal, Government comments from the various design sections and from other concerned agencies involved in the review process will be made in DrChecks.

The review will be for conformance with the contract. The Contractor shall respond to all comments in DrChecks in advance of the next scheduled submittal. The response shall identify action taken with citation of location within the relevant document. Generalized statements of intention such as "will comply" or "will revise the specification" are not acceptable.

If the Contractor disagrees technically with any comment and does not intend to comply with the comment, the Contractor must clearly outline, with ample justification, the reasons for noncompliance within five (5) days after close of the review period in order that the comment can be

resolved. If the Contractor believes the action required by any comment exceeds the requirements of this contract, he should "flag" the comment within DrChecks as being outside design scope. Further, the contractor shall notify the Government in writing immediately.

Review conferences will be held for each design submittal at Bolling Air Force Base. The Contractor shall bring the personnel that developed the design submittal to the review conference. These conferences will take place the week after review completion of each submittal.

During the design review process, comments will be made on the design submittals that will change the drawings and specifications. The Government will pay no additional compensation to the Contractor for the incorporation of comments. Review comments are considered part of the design/build process.

1.7 DESIGN ANALYSIS

1.7.1 Media and Format

Present the design analysis on 8-1/2-inch by 11-inch paper except that larger sheets may be used when required for graphs or 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.

1.7.2 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.

1.7.3 Design Calculations

Design calculations are a part of the design analysis. 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, formulas, and references. Explain all assumptions and conclusions. Calculation sheets shall carry the names or initials of the computer and the checker and the dates of calculations and checking. No portion of the calculations shall be computed and checked by the same person.

1.7.4 Computerized Design Analysis (ADPS)

The design analysis shall include descriptions of the computer programs used and copies of the input data and output summaries. When the computer output is large, it may be divided into volumes at logical division points. Precede each set of computer printouts by an index and by a description of the computation performed. If several sets of computations are submitted, a

general table of contents in addition to the individual indices shall accompany them. Preparation of the description that must accompany each set of printouts shall include the following:

Explain the design method, including assumptions, theories, and formulas.

Include applicable diagrams, adequately identified.

State exactly the computation performed by the computer.

Provide all necessary explanations of the computer printout format, symbols, and abbreviations.

Use adequate and consistent notation.

Provide sufficient information to permit manual checks of the results.

1.8 DRAWINGS

Prepare all drawings using Computer-Aided Design and Drafting (CADD) so that they are well-arranged and present complete information. The Contractor shall prepare the drawings with such clarity that the Corps of Engineers could construct the facility without any additional assistance from the Contractor. 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, and minimize unnecessary wasted space. Do not include details of standard products or items that are adequately covered by specifications on the drawings. Detail the drawings such that conformance with the contract can be checked and to the extent that shop drawings can be checked. Do not use shop drawings as design drawings. The Contractor shall use standard Corps of Engineers title blocks and borders on all drawings. An index of drawings shall be included with each submittal. The Government will furnish the Contractor drawing numbers for inclusion in the title blocks of the drawings.

All CADD drawings shall be prepared in accordance with the applicable provisions of the "CENABEN Contract Clauses for CADD Deliverables" which are available at <http://www.en.nab.usace.army.mil/> or by request on CD ROM.

1.9 SPECIFICATIONS AND SUBMITTAL REGISTER

1.9.1 Specifications

The design shall be developed using Unified Facilities Guide Specifications (UFGS) and SPECSINTACT software. Both the UFGS and SPECSINTACT are available free of charge for downloading from <http://www.ccb.org/ufgs/ufgs.htm>. Where UFGS do not include a specification for a particular feature of work, the Contractor may use specifications from other agencies or sources, or provide custom-written specifications. Such specifications only may use another software program than SPECSINTACT. The specifications for this project shall be edited and submitted in hand marked-up or graphic highlighted (via word processor or specification software) draft version at the Final (95%) Review submittal stage. UFGS shall only be edited as directed in the specification notes and instructions, where choice options allow, and where features of work are added or deleted. A minimum quality standard for the project shall be

maintained by only selecting among the choices for quantity and quality that are presented in the applicable UFGS unless specifically indicated otherwise in Section 1011, Design Criteria.

Manufacturer's catalog cut sheets will not be accepted as a substitute for the "products" portion of the specifications, nor any other part. Catalog cut sheets may be added to the specifications, but not as a substitute.

Include with Contractor prepared specifications all Sections from the RFP (furnished by the Government in SPECSINTACT "sec" files) and specification attachments (furnished by the Government in portable document format and readable with Adobe Acrobat).

Project specifications shall be furnished in CSI, 16 Division, 3 Part Section Format. Each specification volume shall include a cover page and table of contents and be printed on 20 lb. white paper.

The cover page shall include:

- a. Project title, activity and location
- b. Construction contract number
- c. Construction Contractor's name and address
- d. Design firm's name and address
- e. Names of design team members responsible for each Contractor prepared technical discipline of the project specification
- f. Name and signature of a Principal of the design firm
- g. Line for the designated Government representative to sign and date for the Government.

1.9.2 Submittal Register

The contractor shall develop the submittal requirements during the design phase of the contract, by producing a Constructor Submittal Register. Proper tagging of SPECSINTACT-prepared specifications allows this form to be generated at printing. If custom-written specifications are developed which are not in SPECSINTACT, the register for those sections must match the SPECSINTACT-generated form in format and columns (quantities and designations). The Contractor shall be responsible for listing all required construction submittals necessary to insure the project requirements are complied with. The Register shall identify submittal items such as shop drawings, manufacturer's literature, certificates of compliance, material samples, guarantees, test results, etc. that the Contractor shall submit for review and/or approval action during the life of the construction contract.

During construction the Contractor will be required to run the submittal register program in the Resident Management System (RMS). SPECSINTACT allows downloading of a submittal register program that is compatible with the RMS. However, for construction purposes the Contractor will be required to add all submittals from non-SPECSINTACT-prepared specifications into RMS manually. The Contracting Officer can provide advice regarding this

process if requested to do so.

1.10 SURVEYING & MAPPING

1.10.1 General

The Government has performed topographic surveys of the approximate limits of the project, as shown in the RFP drawings. The contractor shall provide any additional necessary survey in accordance with the requirements below. Provide a written scope of work to the survey crews performing this work. All surveying and mapping shall be accomplished under the direction of a District of Columbia Registered Land Surveyor.

All survey work shall be performed under the supervision of a registered land surveyor. The final survey shall be signed and sealed by that surveyor.

Survey accuracy shall be third order for topographic surveys and second order for GPS control. The survey shall comply with all applicable sections of the National Map Accuracy Standard and FGCC Geometric Accuracy Standards and Specifications for using GPS Relative Positioning Techniques.

The survey shall be provided in CADD format in accordance with the Drawings requirements section above.

The survey shall be scaled at 1:400, with one-foot contour intervals. Contour lines shall be continuous 2-Dimensional polylines with X and Y coordinates along the same Z elevation. Contours shall be created by a tin of the surveyed point data utilizing land development software. The tin shall be an accurate model of the existing site. One tin shall be developed for the entire site. Major (1 meter) and minor (0.5 meter) contour intervals shall be placed on separate CADD layers. All contours shall be dashed, with different line weights differentiating the minor and major contours. Spot elevations shall be provided as necessary to clearly delineate the topography, including all high and low points.

Horizontal control shall be based on the NAD83 system. Vertical control shall be based on the NAVD88 system. Coordinate and/or elevation information shall be provided for traverse points, benchmarks, grid ticks, and grid reference points. Each drawing sheet shall include a north arrow and a drawing scale.

All major features affecting the topography shall be shown, including buildings, roads, channels, swales, and wetlands. The type of construction (brick, wood, metal, etc.) and finish floor elevations shall be indicated for all buildings and structures.

The survey shall show all existing utilities (aerial, surface, and subsurface). The type, size, top and invert elevations, direction of flow, and utility owner shall be indicated.

Underground utilities shall be located by Miss Utility. The surveyor shall perform test pits as necessary to verify the location and depth of underground utilities. The surveyor shall repair utilities to their original condition if damaged by the test pit excavation. Test pits shall be coordinated with the installation or municipality prior to any excavation.

The survey shall show all paved areas, including equipment pads. The type

of pavement and the location of curb and gutter shall be shown.

The survey shall show the location, type, and size of individual trees, or, if applicable, the existing tree lines.

The minimum text size for notes, narrative, and tables shall be 12 point. All other text shall be at least 10 point.

1.11 DESIGN SUBMITTALS

1.11.1 Preliminary (50%) Site and Shore Design with (Bid Option 1) 30% Boat Slip Design Submittal

The review of this submittal is primarily to ensure that the contract documents and design analysis are proceeding in a timely manner and that the design criteria are being correctly interpreted. Upon approval of this submittal, the Government shall authorize the notice to proceed with mobilization. The design submittal shall contain, as a minimum, the following:

1.11.1.1 Site Development

A. Design Analysis: A narrative description of siting requirements and design rationale for roads, streets, parking facilities, earthwork, utilities, and other related site aspects shall be provided. The design analysis shall address the following:

1. Storm Drainage: The design of all new storm drainage and an analysis of the existing storm drainage to which the new will be connected, if applicable, shall be presented.
2. Water Service: A description of existing and proposed water service for the proposed facility shall be provided. Adequacy of the existing system and additions required for adequate fire protection shall be included. Any permit requirements shall be explained.
3. Erosion and Sedimentation Control and Stormwater Management: A description of erosion and sediment control and storm water management requirements, design, and design rationale shall be provided. Any permit requirements shall be explained.

B. Drawings should include:

1. Survey Plan
2. Demolition Plan: Clearly indicate with a legend items to be removed, abandoned and relocated.
3. Plan: A site plan shall be provided including:
 - a. Existing topography, including contours with sufficient spot elevations to establish existing ground surface in high and low areas. Existing buildings, roads, streets, parking areas, storm drains, sanitary sewers, water lines, gas lines, steam lines, etc., to remain shall be shown. The base line and

bench mark information shall be identified.

b. New docks, structures, improvements, etc. shall be shown.

c. New grading shall be shown with contours and spot elevations in sufficient detail to indicate the drainage pattern and earthwork quantities.

d. Locations of all inlets, storm and sanitary manholes, water valve, electric manholes and other utility structures visible at grade on the plan shall be indicated. New utility lines serving the utilities shall not be shown on this plan.

e. Storm water management detention areas shall be shown if required.

4. Utilities Plan: All existing and new utilities shall be shown, including but not limited to sanitary sewers, water lines, storm drainage, gas lines, subdrainage, and foundation drains. Electrical and telephone lines may be shown on an electrical utility plan. All existing buildings, roads, parking areas etc. shall be shown. Contours and spot elevations shall not be shown. The plan shall clearly present:

a. Existing sanitary sewers and force mains, including manhole and cleanout locations. Sizes of all sanitary sewers and force mains shall be indicated.

b. Existing and new water distribution and service lines, including valve and fire hydrant locations. Sizes of all service and distribution lines shall be shown.

c. Existing and new storm drainage system and roof drainage with inlets, manholes, and headwalls indicated. Sizes of storm drains shall be shown.

d. Existing steam and/or gas distribution and service lines including valves.

e. All utilities to be abandoned, relocated, or removed.

5. Layout Plan: Layout dimensions for all new features shall be shown. Base lines used to lay out the new work shall be clearly identified. The use of coordinates for locating new features is acceptable, but base line layouts are preferable. Layout data may be shown on the Utilities Plan if feasible. If the project has numerous utilities, a separate layout plan shall be prepared for clarity.
6. Erosion and Sedimentation Control Plan: Temporary erosion and sediment control measures for the construction activity shall be shown.

C. Outline Specifications: Appropriate guide specifications shall be selected and listed for the aspects of the project.

D. Anticipated permit requirements for water and wastewater features shall be described.

1.11.1.2 Geotechnical

A geotechnical report and design analysis has been performed and provided by the government, and is included in the Appendix.

1.11.1.3 Landscape, Planting and Turfing

The landscape planting design narrative shall describe the analysis of existing site conditions, including an indication of existing plant materials that are to remain on the site. The statement of concept shall indicate specific site problems related to proposed development and the rationale for proposed plant locations. The narrative shall also include a list of suggested types and sizes of plant materials which are to be used, based upon the designated functional and visual criteria. All landscaping improvements shall be in accordance with Bolling AFB standards.

The drawings shall be prepared in scale with the site layout and grading plans, and shall include reference coordinates, north arrows, graphic scales and appropriate legends. An overall planting layout shall be developed and enlarged detail plans of specific areas shall be provided as needed to clarify requirements. The proposed layout shall indicate shade trees, evergreen trees, flowering trees, shrub masses, etc. according to designated functional and visual criteria. A legend including sizes of plants recommended for each of the above categories shall be provided. The drawings and all subsequent plans shall indicate existing and proposed buildings, paved areas, signs, lights, transformers, dumpster areas, storm drainage system, and other structures and utilities.

1.11.1.4 Structural Design

All references used in the design shall be listed, including Government design documents and industry standards.

The live loads to be used for design shall be stated, including wind loads, lateral earth pressure loads, surcharge loads, ground water level and loads, seismic loads, etc. as applicable.

The method of providing lateral stability for the structural system to meet seismic and wind load requirements shall be described. Sufficient calculations to verify the adequacy of the method shall be provided.

Calculations, including computer analyses, shall be furnished for all principal members. Computer software used shall be widely accepted, commercially available programs. Sufficient documentation shall be provided to interpret input and output.

Drawings showing dock and bulkhead layout, including all principal members, shall be provided as applicable. Typical sections shall be furnished.

1.11.1.5 Plumbing

All references used in the design shall be listed, including Government design documents and industry standards.

Justification and brief description of the types of plumbing fixtures,

piping materials and equipment proposed for use shall be provided.

Detailed calculations for systems shall be provided, such as sizing calculations for waste and water piping, water heaters, and pumps.

Locations and general arrangement of plumbing fixtures and major equipment shall be indicated.

Plans and isometric riser diagrams of, cold water, piping shall be provided for all areas.

Equipment and fixture schedules shall be provided, including descriptions, capacities, locations, connection sizes, and other information as required.

1.11.1.6 Fire Protection System

Hydraulic calculations based on water flow tests are provided to ensure that flow and pressure requirements can be met with current water supply.

1.11.1.7 Exterior Electrical Distribution System

All references used in the design including Government design documents and industry standards shall be listed.

The electrical distribution system shall be described, including the changes to be made to the existing system to accommodate this project. Any deficiencies to be corrected shall be stated and all new work being performed shall be described.

The electrical characteristics of the power supply from the service point to the main service equipment shall be indicated.

The type, number, voltage rating and connections, and kVA rating of transformers shall be provided.

The type of conductor to be used and a justification for its use shall be provided.

The criteria used for the exterior design, such as primary and secondary voltage drop, shall be provided. The physical characteristics of both the underground and overhead power lines shall be described. The short circuit current available at the site shall be provided, including the source of this value.

All exterior lighting systems shall be described. The fixture types, poles, and design lighting levels shall be indicated. Point-to-point calculations showing that all design levels have been achieved shall be provided.

Energy conservation measures and/or techniques being incorporated into the design shall be described.

Exterior electrical design drawings shall indicate all poles (power and lighting), conductors (overhead and underground), and manholes. Pertinent components shall be detailed, including, but not limited to, poles, manholes, duct banks, etc. Calculations support all manhole locations shall be provided.

All removals shall be shown on demolition plans.

1.11.2 30% Boat Slip (Bid Option 1)

The Contractor shall select a boat slip manufacturer and provide examples of materials, configurations, and proposed layout of the new boat slips.

1.11.3 Final (95%) SITE AND SHORE DESIGN AND (BID OPTION 1) 65 % BOAT SLIP SUBMITTALS

The review of this submittal is to ensure that the design is in accordance with directions to the Contractor provided during the design process. Upon approval of this submittal, the Government shall authorize the notice to proceed with the site and shore construction. The Final (95%) Design Submittals shall contain, as a minimum, the following items:

- a. Complete construction documents plans and specifications at the level of detail needed for bidding the project, including a complete list of equipment, fixtures, and materials to be used. The final drawings are an extension of the previously reviewed drawings and shall include those comments. All details shall be shown on the drawings.
- b. Complete design analysis verifying that the design complies with the requirements of the project. The final design analysis is an extension of the previously reviewed design analysis and shall include those comments.
- c. Marked-up specifications. The specifications shall be coordinated with the drawings, and shall describe in detail all items shown on the drawings.

1.11.3.1 Site Development

In addition to the items listed in the previous submittal requirements, the following items shall be addressed:

A. Design Analysis: All references and guidance used to develop the project shall be indicated, such as data from Using Agency and Corps of Engineers technical manuals. The final design analysis shall address all site aspects, including the following:

1. Storm Drainage: Storm drainage system modifications shall be fully described and the basis for design, including all criteria used, shall be provided. Layout sketches of storm drainage areas showing inlets and piping shall be included.
2. Water Service: Proposed work is described in accordance with TM 5-812-1, TM 5-813-5, and TM 5-813-6. References shall be cited, and calculations are shown. A sketch of water systems in the vicinity of the project shall be provided. Existing water storage facilities and capacities on Post shall be noted, and results of hydrant flow tests shall be provided.

B. Drawings: The final drawings are a continuation of the ones prepared for the concept submission, and shall include:

1. Survey Plan.

2. Demolition: All utilities and other items to be removed, abandoned, capped, plugged and relocated shall be indicated.

3. Grading Plan: New and existing contours and spot elevations shall be shown in sufficient detail to clearly indicate grading, positive drainage, and stormwater management facilities. Inlets are shown with top of frame elevations indicated. Manholes, valves, hydrants, headwalls and all existing underground utilities are shown. Any other features of work which will appear on the new ground surface shall be shown. New utility lines are not shown.

4. Utilities Plan: Each existing and new utility shall be clearly shown, including building service connections and connections to existing lines. Locations of all new and existing fire hydrants, valves, manholes, inlets, etc. shall be indicated. Sizes of existing and new lines shall be shown, including new inlet and manhole numbers. A complete legend shall be provided. All new piping, inlets, manholes, hydrants, etc., shall be located by dimension from buildings, streets, etc. All storm drain piping for stormwater management shall be indicated. Subdrain piping for paved areas shall be shown if required.

5. Layout Plan: Existing and new buildings, roads, streets, walks, parking and service areas, etc. shall be shown. New or existing contours and spot elevations shall not be shown. The baseline information from which all new facilities are to be located shall be clearly indicated. The layout shall be complete and fully dimensioned. Stationing and curve data shall be provided for road or street layout if applicable. A complete legend shall be provided.

6. Profiles:

a. Profiles for storm drains, sanitary sewers, and force mains shall be provided for each location where utilities cross and the possibility for conflicts occur. Profiles for water lines shall be provided if there are numerous utility crossings along its alignment. Utility profiles shall show:

Existing and finished grade.

Manholes, inlets, headwalls, etc., with numeric designations corresponding to those shown on utility plan.

Top and invert elevations.

Size, length, and slopes of all lines.

All existing and new utility crossings.

Type of structures (i.e., type "E" inlet, standard manhole, etc.) required at each junction.

b. Profiles for boat ramp, roads, streets, etc., shall show:

Existing and finished grade, with all vertical alignment geometric data shown.

All new and existing utility crossings.

- c. All profiles shall be drawn on compatible scales: 1:400 horizontal corresponding to 1:40 vertical. The vertical scale may vary where profiles transverse very steep topography.

7. Details: Standard details for storm drainage, water, sanitary sewer, and miscellaneous site features shall be provided in compliance with the Department of Public Work's criteria, such as Installation Design Guides or, if none are available, the respective State highway and drainage standard details. Special details shall be prepared as required for special site features, such as fencing or benches. The Contracting Officer may request a detail to be provided on the design drawings.

C. EROSION AND SEDIMENTATION CONTROL, STORM WATER MANAGEMENT, AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT:

1. Erosion and Sedimentation Control Plans and Stormwater Management Plans shall be prepared by the Designer of Record during design. Each shall be in accordance with the criteria of the governing agency at the project site. In the early stages of design, the Designer of Record shall contact the state, county, or local authorities for their particular requirements for each item. Erosion and sedimentation control and stormwater management shall be incorporated in all projects where required. If not required, a waiver shall be obtained from the Government agency having jurisdiction.

2. The Designer of Record shall submit the erosion and sedimentation control and stormwater management documentation to the District of Columbia Department of Health for review.

3. The Designer of Record shall make all submissions for review in a timely manner. Each submission shall be scheduled to allow the reviewing authority to make comments and request resubmission.

4. The Designer of Record shall include all erosion and sedimentation control notes, directions, details, etc., on the design drawings.

5. NPDES permit information shall be prepared in accordance with Section 01000, ADMINISTRATIVE REQUIREMENTS.

D. Permits for Water Supply and Sanitary Sewage

The Designer of Record shall contact the Department of Consumer and Regulatory Affairs to verify the correct procedure to follow to obtain construction permits. The Designer of Record shall prepare and submit all permit applications.

1.11.3.2 Structural Design

Completed checked calculations shall be furnished for all structural members. Changes required by comments on the previous design submittal shall be incorporated.

Structural drawings shall be coordinated with all other design disciplines.

The final structural drawings shall contain the following information in the general notes:

- a. The allowable soil bearing value, lateral earth pressures, ground water and river water levels, soil coefficients, and surcharge loads..
- b. The design stresses of structural materials used.
- c. The design live loads used in the design of various portions of the structures.
- d. The design wind speed.
- e. The seismic site classification "Sss, "S1", and "R" values used in design.

The final structural drawings shall be signed and sealed by a District of Columbia Professional Engineer and include all plans, sections, details, and notes to clearly describe the work.

1.11.3.3 Plumbing Design

Final plumbing system drawings and analysis shall be provided.

1.11.3.4 Exterior Electrical Distribution System

A coordination study with appropriate curves shall be provided to show that ALL protective devices have been fully coordinated. Completed short circuit calculations for the entire electrical system shall be provided. All equipment shall be identified by manufacturer's name and catalog number.

Complete voltage drop and lighting calculations shall be provided. 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 using the point-to-point method shall be provided for all exterior locations requiring illumination.

The design narrative shall be an updated version of the 50% submittal to reflect the final design. Calculations shall be included with the narrative. The calculations and coordination study shall have the seal of the registered engineer who performed them affixed to the cover sheet.

The drawings shall be a completed version of the 50% design drawings with all comments and other changes incorporated.

All details shall be completed. Congested areas shall be shown by enlarged drawings.

The drawings shall be thoroughly checked to ensure that the proper electrical connections are provided for equipment and there are no conflicts between the location of electrical equipment and equipment of other disciplines.

1.11.3.5 65% Boat Slip Design (Bid Option 1)

The boat slip plan shall contain details of the boat slip system including all accessories, materials, and utility pedestals. The plan shall show the approved layout of the proposed boat slips.

1.11.4 95% Boat Slip Design (Bid Option 1) and Landscaping Submittal

The review of this submittal is to ensure that the design is in accordance with directions to the Contractor during the design process. Upon approval of this submittal, the Government shall authorize the notice to proceed with the boat slip construction (Bid Option 1) and landscaping improvements.

After the review, the Contractor shall revise the Contract Documents by incorporating any comments generated during the review and shall prepare final hard copy Contract Specifications. The Contractor shall submit the following documents for the design complete submittal (electronic files on CD-ROM):

Design analysis, in final 100% complete form (five (5) hardcopies and two (2) copies in PDF format)

100% complete drawings (five (5) complete full size sets of drawings and five (5) complete half size sets)

Final specifications (five (5) hardcopy sets and two (2) copies in Microsoft Word)

Annotated 95% review comments (five (5) hardcopies)

CADD files of all drawings in AUTOCADD Release 2000 format (2 copies)

CALS Files of 100% complete drawings (two (2) copies)

The Contractor shall submit the Design Complete Submittal not later than 14 calendar days after the Government returns the annotated Final Design Review Submittal.

1.11.4.1 95% Boat Slips

The boat slip plan shall contain, as a minimum complete details required for the construction of the boat slip system, including bridges, docks, fingers, electrical distribution system, water distribution system, pipe anchors, deck materials and bumper materials, complete installation instructions shall be provided and details on utility connections to existing supply lines shall be provided.

1.11.4.2 Landscape, Planting and Turfing

Final design drawing(s) shall include a complete schedule of plant materials indicating botanical and common names, plan symbols, quantities, sizes, condition furnished, and pertinent remarks. Drawings shall correspond with the site layout and grading plans, and shall include reference coordinates, north arrows, graphic scales and appropriate legends. An overall planting layout shall be developed including enlarged detail plans of specific areas as needed to clarify requirements. Final design drawings shall indicate proposed plants by a (+) mark for the plant location and a circle scaled to approximately 2/3 the ultimate growth spread (diameter) of plants. Final drawings shall also include the basic

details for installation of tree, shrub, and ground cover planting, as well as any other applicable details for clarification of specific project requirements.

1.12 DD FORM 1354

The Contractor shall complete DD Form 1354 and submit the completed form to the Government 90 days before the contract completion date. As a minimum, the following items in units of measure to be designated by the Government shall be listed on the form:

Item

Transformer, each type and size
Transfer switch, each type and size
Ductbank, each size and type of service
Manholes and handholes, electrical and communication
Electrical aerial distribution, each size and type of service
Electrical service to each type of exterior lighting fixtures
Water and sewer, each size, type of service and type of line
Manholes, each size
Valves, each type and size
Chilled water supply and return, each size and type of line
Storm drain lines, each size and type of line
Asphalt parking area
Fencing, each type and height
Gate, each type and method of operation
Boat Ramp Area
Landscape planting area
Sod/Seeding

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SECTION 01050

JOB CONDITIONS

01/01

PART 1 GENERAL

1.1 LAYOUT OF WORK

LAYOUT OF WORK: (APR 1984) The Contractor shall lay out his work and shall be held responsible for all measurement's in connection therewith. The Contractor shall furnish, at his own expense, all stakes, templates, platforms, equipment, tools, and materials and labor as may be required in laying out any part of the work. The Contractor will be held responsible for the execution of the work to such lines and grades as may be established or indicated by the Contracting Officer. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them. If such marks are destroyed, by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer at his discretion. The expense of replacement will be deducted from any amounts due or to become due the Contractor. (CENAB)

1.2 PHYSICAL DATA: (APR 1984)

Data and information furnished or referred to below is for the Contractor's information. The Government shall not be responsible for any interpretation or conclusion drawn from the data or information by the Contractor. (CENAB)

1.2.1 Transportation Facilities

1.2.1.1 Truck Hauling on Base

a. All Contractor vehicles shall enter and exit Bolling AFB through the South Gate, which is accessed off of South Capitol Street. South Capitol Street is located off of Exit 2 on US Interstate 295. Upon entering the South Gate, proceed to the worksite via Chappie James Boulevard and turn at Arnold Avenue.

b. The project site is off South Capitol Street, which is adjacent to 295 and proceed to the worksite via Chappie James Boulevard. The Contractor shall cover open-bodied vehicles transporting sand, gravel, fill materials, dirt, construction debris, rubble, or other material which may become airborne and create air pollution on base.

1.2.2 Explorations

The physical conditions of site investigations by surveys, auger borings and core borings can be found at the end of this section. Whenever subsurface exploration logs are presented in the contract documents, soil test results are available for inspection at Whitman, Requardt and Associates, LLP, Geotechnical Department, 801 South Caroline Street, Baltimore, Maryland. Soils and rock samples are also available for

inspection; however, prospective bidders are required to call 410-235-3450 between the hours of 9:00 a.m. and 3:30 p.m., Monday through Friday (excluding Federal Holidays), a minimum of 24 hours in advance to arrange a time and date for the inspection of the samples.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES FOR DESIGN BUILD:

SD-01 Preconstruction Submittals

Shut Down Utility Services; G AR.

Prior approval for service/utility interruptions.

When changes and/or relocations are required.

Checklist; G AR

A Risk Assessment for excavation and other work in the vicinity of utilities.

1.4 BASE CIVIL ENGINEERING WORK CLEARANCE REQUEST, AF FORM 103

Prior to commencing construction work, whenever the ground surface is to be disturbed, or when erecting structures or operating equipment near overhead lines, the Contractor shall obtain and possess at all times, an approved AF Form 103, Base Civil Engineering Work Clearance Request. Observe all policies and procedures for processing AF Form 103 as specified in the CES Operating Instruction 85-62 (1997).

AF Form 103 will be completed 7 to 14 calendar days prior to the actual start of excavation or erection operation and shall remain valid for 10 calendar days. The Contractor shall notify the CCI of the need to revalidate the form every 10 calendar days.

1.5 UTILITIES

1.5.1 Availability of Utilities Including Lavatory Facilities: (JUN 1980)

It shall be the responsibility of the Contractor to provide all utilities he may require during the entire life of the contract. Water and electricity will be furnished to the contractor by the government from the government's existing system and supplied at no cost to the contractor. He shall install and maintain all necessary supply lines, connections, piping, and meters if required, but only at such locations and in such manner as approved by the Contracting Officer. Before final acceptance of work under this contract, all temporary supply lines, connections and piping installed by the Contractor shall be removed by him in a manner satisfactory to the Contracting Officer. Electrical energy shall be used for resistance heating except within the contractor's office trailer. (CENAB)

The contractor shall submit a drawing indicating approximate location(s) for utility markings 10 calendar days before marking any paved surfaces (asphalt, concrete, streets, curbs, manholes, sidewalks). Only after the proposed marking is approved by the Chief, Contract Management or his designated representative, the contractor shall contact utility companies to mark the area(s).

The Contractor shall provide supervision of all markings for utility locations, engineering evaluations or other required markings to ensure that:

Correct areas are marked

Painted markings are done with a chalk base, naturally erasable product.

The number of markings are minimized and that all markings are a maximum of 3"-4" in height and are as inconspicuous as possible.

Bright colored permanent paint shall not be used.

Utilities marked by "Miss Utility" are subject to Miss Utility regulations.

Utilities marked by others will be marked one time per AF Form 103 validation. It is Contractor's responsibility to maintain these markings for the duration, by means of stakes, flags, etc., as may be necessary to make workers aware of utilities.

Contractor is responsible for the repair of and/or the cost to have repaired any marked utilities damaged during excavation, and shall notify the CCI and Contracting Officer immediately upon damage.

1.5.2 Interruption of Utilities: (1972)

a. No utility services shall be interrupted by the Contractor to make connections, to relocate, or for any purpose without approval of the Contracting Officer.

b. Request for permission to shut down utility services shall be submitted in writing to the Contracting Officer not less than 12 days prior to proposed date of interruption. The request shall give the following information:

c. Nature of Utility (Gas, L.P. or H.P., Water, Etc.)

d. Size of line and location of shutoff.

e. Buildings and services affected.

f. Hours and date of shutoff.

g. Estimated length of time service will be interrupted.

h. Services will not be shut off until receipt of approval of the proposed hours and date from the Contracting Officer.

i. Shutoffs which will cause interruption of Government work operations as determined by the Contracting Officer shall be accomplished during regular non-work hours or on non-work days of the Using Agency

without any additional cost to the Government.

j. Operation of valves on water mains will be by Government personnel. Where shutoff of water lines interrupts service to fire hydrants or fire sprinkler systems, the Contractor shall arrange his operations and have sufficient material and personnel available to complete the work without undue delay or to restore service without delay in event of emergency.

k. Flow in gas mains which have been shut off shall not be restored until the Government inspector has determined that all items serviced by the gas line have been shut off. (CENAB)

1.5.3 Alterations to Utilities: (AUG 1968)

Where changes and relocations of utility lines are noted to be performed by others, the Contractor shall give the Contracting Officer in writing advance notice at least thirty days prior to any excavation requesting utility markings. In the event that, after the expiration of thirty days after the receipt of such notice by the Contracting Officer, such utility lines have not been changed or relocated and delay is occasioned to the completion of the work under this contract, the Contractor will be entitled to a time extension equal to the period of time lost by the Contractor after the expiration of said thirty day period. Any modification to existing or relocated lines required as a result of the Contractor's method of operation shall be made wholly at the Contractor's expense and no additional time will be allowed for delays incurred by such modifications. (CENAB)

1.5.4 Utility Markings

The contractor shall submit a drawing indicating approximate location(s) for utility markings 10 calendar days before marking any paved surfaces (asphalt, concrete, streets, curbs, manholes, sidewalks). Only after the proposed marking is approved by the Chief, Contract Management or his designated representative, the contractor shall contact utility companies to mark the area(s). It is the Contractor's responsibility to ensure that all permits (excavation or otherwise, including DPW permits) are current and up-to-date without expiration. In addition to the above requirements the Contractor shall:

- a. Correct areas are marked.
- b. Painted markings are done with a chalk base, naturally erasable product.
- c. The number of markings are minimized and that all markings are a maximum of 3" - 4" in height and are as inconspicuous as possible.
- d. Bright colored permanent paint shall not be used.
- e. Utilities marked by "Miss Utility" are subject to Miss Utility regulations.
- f. Utilities marked by others will be marked one time per AF Form 103 validation. It is Contractor's responsibility to maintain these markings for the duration, by means of stakes, flags, etc., as may be necessary to make workers aware of utilities.

- g. Visually survey and verify that all utility markings are consistent with existing appurtenances such as manholes, valve boxes, poles, pedestals, pad-mounted devices, gas meters, etc. prior to any excavation.
- h. Hand dig test holes to verify the depth and location of all utilities prior to any mechanical excavation within the limits of work. Other non-damaging methods for utility verification, as indicated in (d) below, may be considered subject to approval by the Contracting Officer. Also, verify that any abandoned utilities are not active.
- i. Preserve all utility markings for the duration of the project to the furthest extent possible.
- j. When excavation is performed within 2 feet of any utility line, a non-damaging method of excavation shall be used. The non-damaging method shall be hand digging. Other non-damaging methods, such as, soft digging, vacuum excavation, pneumatic hand tools, may be considered subject to approval by the Contracting Officer.
- k. Regardless of the type of excavation, the Contractor shall notify the Contracting Officer a minimum of 72 hours prior to any excavation activity. Failure to notify the Contracting Officer can result in the issuance of a "Stop Work" order, which shall not be justification for contract delay or time extension. The Government reserves the right to have personnel present on site during any type of excavation.
- l. The Contractor's Quality Control System Manager shall ensure that all excavation requirements herein are met at the time of the preparatory phase of quality control, and that the excavation procedures are reviewed during the preparatory phase meeting. This preparatory phase of control shall also establish and document contingency plans and actions to be followed in the event that existing utilities are damaged or interrupted. Locations of shut off or isolation devices along with other safety features shall be established and their operation reviewed.
- m. Any work other than excavation in the vicinity of a utility, that could damage or interrupt a utility, such as, exterior or interior work near transformers, power lines, poles, above ground gas lines, gas meters, etc., shall be done with extreme care. The Contractor shall specifically note during the preparatory phase of quality control, the construction techniques to be used to preclude damaging or interrupting any utility. This preparatory phase of control shall also establish and document contingency plans and actions to be followed in the event that existing utilities are damaged or interrupted. Locations of shut off or isolation devices along with other safety features shall be established and their operation reviewed.
- n. The Contractor shall complete a risk assessment, using the attached checklist, at least one week prior to the start of any excavation or other work in the vicinity of a utility. The risk assessment shall be submitted for government approval prior to any excavation or other work in the vicinity of a utility. A risk assessment shall be completed for each definable feature of work

encountering utilities and shall include all utilities anticipated to be encountered.

1.6 DISPOSAL OF EXISTING MATERIAL AND EQUIPMENT: (DEC 1975)

All removed, dismantled or demolished material and/or equipment including rubble, scrap and debris not specified or indicated to be Government salvaged, reinstalled under this contract or otherwise retained for disposal on Government land will become the property of the Contractor and shall be removed from the site at the end of each work day and disposed of by the Contractor at his own expense and responsibility. (CENAB)

1.7 COMPLIANCE WITH POST/BASE REGULATIONS: (JUL 1980)

The site of the work is on a military reservation and all rules and regulations issued by the Commanding Officer covering general safety, security, sanitary requirements, pollution control, traffic regulations and parking, shall be observed by the Contractor. Information regarding these requirements may be obtained by contacting the Contracting Officer, who will provide such information or assist in obtaining same from appropriate authorities. (MEMO)

1.8 PROTECTION OF GOVERNMENT PROPERTY AND PERSONNEL: (DEC 1975)

1.8.1 Protection of Equipment

All existing Government owned equipment within the work area shall be protected by the Contractor from damage caused by construction operations. As a minimum, the Contractor shall cover all equipment in the work area with dust barriers and protect such items from any damage due to dust, vibration, water, heat or other conditions resulting from construction activities. Existing work damaged by construction operations shall be promptly repaired by the Contractor at his own expense.

1.8.2 Protection of Personnel

The Contractor shall protect personnel by installing safety rails and/or barricades as applicable to prevent injury from unauthorized entry of personnel into work areas. Warning signs shall be erected as necessary to indicate Construction areas or hazardous zones. Work shall proceed in such manner as to prevent the undue spread of dust and flying particles.

1.8.3 Measures to Prevent Damage/Injury

The Contractor shall take such additional measures as may be directed by the Contracting Officer to prevent damage or injury to Government property or personnel. (CENAB)

1.9 ORDER OF WORK AND COORDINATION WITH OTHER CONTRACTORS: (FEB 1979)

Other Contractors are presently working in the same area. After award of this contract a meeting will be held with all contractor representatives and the Contracting Officer to develop a plan of work coordination. In case of disagreement regarding use of an area the decision of the Contracting Officer will control. (CENAB)

1.10 NOTIFICATION

The Contractor shall notify the assigned inspector for the applicable

project (11 CES/CECC) when the Contractor plans to stop all work on the project for a period of more than two workdays (e.g. an extended weekend in conjunction with a holiday such as Easter). This decision by the Contractor to stop all work shall be at the Contractor's cost and risk and will not be taken into consideration for any requested time extension. The notification shall be provided to the inspector in writing and shall identify the dates and duration of any anticipated work stoppage. A copy of this notification shall also be provided to the Contracting Officer.

1.11 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER

1.11.1 Procedure for Determination

This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance the contract clause entitled "Default: (Fixed Price Construction)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

- a. The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.
- b. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

1.11.2 Anticipated Adverse Weather Delays

The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
4	5	6	7	6	6	6	5	2	5	4	3

1.11.3 Impact

Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph "Anticipated Adverse Weather Delays", above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)".

1.12 WORKING HOURS

WORKING HOURS: (DEC 93) Work shall be performed during the normal work week,, 07:15 am to 15:45 pm, Monday through Friday.

- a. Deviations from the normal work week shall not be granted except under unusual circumstances.
- b. Requests for permission to work on Saturdays, Sundays, and Federal holidays shall be submitted to the Contracting Officer for approval, in writing, 72 hours in advance of the proposed date. Answer shall be given within one (1) working day of receipt of request.

1.13 DAMAGE TO WORK (1966 MAR OCE)

The responsibility for damage to any part of the permanent work shall be as set forth in the "Permits and Responsibilities" clause of the Contract Clauses. However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood or earthquake which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work an equitable adjustment pursuant to the "Changes" clauses of the Contract Clauses, will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work(including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage. (CENAB)

1.14 ENVIRONMENTAL LITIGATION (1974 NOV OCE)

If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the "Suspension of Work" clause of the Contract Clauses. The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

The term "environmental litigation", as used herein, means a lawsuit alleging that the work will have an adverse effect on the environment or

that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment. (CENAB)

1.15 EMERGENCIES

1. In the case of an emergency, the CCI, Base Fire Chief, Base Operations Officer, or their representative, shall have the authority to order the Contractor to suspend work and clear the area personnel and equipment.
2. The Contractor shall comply to such an order with all possible speed.

1.16 APPEARANCE OF WORKMEN

1. The Contractor's workmen shall possess an identification card indicating the individual's name, company name, and bearing a picture of the individual
2. Workmen shall be neat and presentable.
3. The Contractor's vehicles shall display emblems indicating the company name.
4. Work clothes shall be comprised of shoes, shirt, and long pants or long coveralls.

1.17 CLEANLINESS

1. The Contractor shall protect Government property and furnishings that may be in, or adjacent to, the work area with appropriate clean drop cloths, barricades, dust-stops, or other provisions.
2. The Contractor shall remove debris, tools, and equipment when work is completed in that particular area.

1.18 PHASING OF EXCAVATION FOR UTILITIES

1. Excavation shall not begin until materials and equipment for that specific portion of the job is on site.
2. Backfilling of the excavation shall be accomplished immediately after installation of the utility.
3. The Contractor is responsible for calling 'Miss Utility' at 1-800-257-7777 48 hours prior to any excavation. A 'Miss Utility' ticket number is required for the completion of AF Form 103.

1.19 SITE RESTORATION

1. Rough grading of utility cuts shall be accomplished immediately after backfilling excavated trenches.
2. Final grading, including the placing of topsoil, if required, shall be accomplished as soon as possible.
3. Required landscaping, or sodding, shall be accomplished at the earliest possible time after backfilling as stipulated in the Technical Provisions of the contract.

1.20 TRENCHING AND EXCAVATING

1. Trenches or excavations, which cut roads, parking lots, driveways, and delivery routes, shall be fully coordinated between the Contractor, CCI, Base Fire Department, and Security Police, prior to the start of work.
2. Excavations and the repair, which will traverse completely across vehicle routes, shall be scheduled in stages, which will allow crossing of vehicles until road plates, and/or permanent repairs are in place.
3. Temporary Patching.
 - a. Temporary patching shall accommodate pedestrian and vehicular traffic until permanent repairs are made.
 - b. Trenches shall be backfilled to within 2 inches of the finished grade.
 - c. Cold mix (KP) or hot asphalt shall be applied and compacted on the remaining 2 inches to the finished grade.
 - d. Gravel (CR6) or other similar materials that have no adhesive properties shall not be used as temporary patching materials.
4. Stockpiling of excavated or borrowed material will not be permitted on Bolling AFB. All material must be removed from Base daily.

1.21 CATALYTIC CONVERTERS

No vehicle equipped with a catalytic converter shall be permitted to operate within 50 feet of any fuel spill, POL area, explosive area, or other potentially hazardous area when identified and/or placarded.

1.22 TOOLS AND EQUIPMENT

All hand tools and equipment utilized by the Contractor must be suitable for use in Class 1, Division 1, Hazardous (Classified) Locations.

1.23 TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY

Upon completion of work, the contractor shall complete DD Form 1354, Transfer and Acceptance of Military Real Property. The CCI will provide the contractor with DD Form 1354 and DD Form 1354 Checklist. The contractor shall complete the form and checklist and submit both to the Real Property Officer through the CCI at the preliminary inspection. Any corrections necessary to the documents shall be completed prior to the final inspection. Improper completion of DD Form 1354 will not be considered a punchlist item; however, the form must be complete and acceptable before final inspection is deemed complete.

1.24 ENERGY REBATE APPLICATION

The Contractor shall prepare applications for the Government to receive all applicable rebates for energy efficient equipment to which the Government is entitled.

1.25 CONTRACT SPECIFICATION NUMBER - BXUR NUMBER

The Contractor shall use Project/Number BXUR 99-0004 and Government assigned Contract Number wherever such references are required in contract correspondence and documentation.

PART 2 PRODUCTS

NOT APPLICABLE

PART 3 EXECUTION

NOT APPLICABLE

ATTACHMENT

RISK ASSESSMENT CHECKLIST

-- End of Section --

RISK ASSESSMENT FOR
EXCAVATION AND OTHER WORK IN THE VICINITY OF UTILITIES

PROJECT NAME: _____

CONTRACT NUMBER: _____

PROJECT INSTALLATION AND LOCATION: _____

PROPOSED EXCAVATION START DATE: _____

1. ESTABLISH EXCAVATION DETAILS AND DRAWINGS (check when completed)
2. PROPOSED EXCAVATION AREA MARKED ("white lining") (check when completed)
3. CONTACT APPROPRIATE ONE-CALL SERVICE FOR PUBLIC UTILITIES:
MD: Miss Utility 1-800-257-7777 N Y : New York City - Long Island One Call Center 1-800-272-4480
N. VA: Miss Utility 1-800-552-7777 PA: Pennsylvania One-Call System Incorporated 1-800-242-1776
VA: Miss Utility of VA 1-800-552-7001 DC: Miss Utility 1-800-257-7777
ONE-CALL NATIONAL REFERRAL CENTER: 1-888-258-0808
- CONTACT INSTALLATION/OWNERS OF ALL PRIVATELY OWNED UTILITIES (NON ONE-CALL MEMBERS)
4. DATE UTILITIES MARKED AND METHOD OF MARKING
ONE-CALL LOCATORS _____
OTHER LOCATORS _____
5. CONTACT APPROPRIATE DPW REPRESENTATIVES AND COMPLY WITH INSTALLATION PERMIT REQUIREMENTS: _____
6. UTILITIES IDENTIFIED ON-SITE:
 NONE ELECTRIC GAS WATER TELEPHONE CATV SEWER OTHER _____
7. LEVEL OF RISK: (Based upon personnel safety and consequences of utility outages.)
 SEVERE: Excavation required within the immediate vicinity (<2-ft) of a MARKED utility.
 MODERATE: Excav. required outside the immediate vicinity (> 2-ft) of MARKED utility.
 MINIMAL: Excavation required in an area with NO utilities.
8. EXISTING FACILITIES/UTILITIES IN VICINITY:
 NON-CRITICAL MISSION CRITICAL HIGH-PROFILE CEREMONIAL
 OTHER _____
 CONSEQUENCES IF EXISTING UTILITIES ARE DAMAGED/DISRUPTED _____

9. ENGINEERING CONTROLS REQUIRED:
 NONE HAND EXCAVATE TO LOCATE UTILITY EXCAVATE WITH DUE CARE
 OTHER _____
10. ADMINISTRATIVE CONTROLS REQUIRED:
 Notification of Contracting Officer's Representative, NOTIFIED on: _____
 Notification of Installation/DPW Representative, NOTIFIED on: _____
11. EMERGENCY NOTIFICATION AT INSTALLATION: POC & PHONE NUMBER _____

THE INFORMATION NOTED ABOVE IS ACCURATE AND THE WORK IS READY TO PROCEED
SIGNED and DATE _____ CQC MANAGER

12. ON-SITE GOVERNMENT REP. RECOMMENDATION FOR APPROVAL TO EXCAVATE:
 YES NO SIGNATURE AND DATE: _____
Comments: _____
13. AREA ENGINEER APPROVAL TO EXCAVATE:
 APPROVED DENIED SIGNATURE AND DATE: _____
Comments: _____
14. CHIEF, _____ DIVISION APPROVAL TO EXCAVATE:
 APPROVED DENIED SIGNATURE AND DATE: _____
Comments: _____

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DIVISION 01 - GENERAL REQUIREMENTS

SECTION 01060

SAFETY

01/01

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- 1.4 ACCIDENTS
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PART 2 PRODUCT

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01060

SAFETY
01/01

PART 1 GENERAL

1.1 APPLICABLE PUBLICATION

The publications listed below form a part of this specification and are referred to in the text by the basic designation only. All interim changes (changes made between publications of new editions) to the U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, will be posted on the Headquarters Website. The date that it is posted shall become the official effective date of the change and contracts awarded after this date shall require to comply accordingly. The website location where these changes can be found is under the button entitled "Changes to EM", located at: "http://www.hq.usace.army.mil/soh/hqusace_soh.htm".

U.S. ARMY CORPS OF ENGINEERS:

EM 385-1-1 (3 Sep 1996) U.S. Army Corps of Engineers
Safety and Health Requirements Manual

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES for design build:

SD-01 Preconstruction Submittals

Safety Supervisor; G AR.

A safety supervisor shall be responsible for overall supervision of accident prevention activities.

SD-07 Certificates

Language Certification

It is the Contractors responsibility to ensure that all employees understand the basic english language.

SD-09 Reports

Activity Phase Hazard Analysis Plan; G AR.

The addressing of the activity phase hazard analysis plan for each activity performed in a phase of work.

Outline Report

A report for each past activities review.

OSHA Log

A log shall be reported monthly for injuries.

1.3 GENERAL

The U.S. Army Corps of Engineers Safety and Health Requirements Manual, EM 385-1-1, and all subsequent revisions referred to in the Contract Clause ACCIDENT PREVENTION of this contract, are hereby supplemented as follows:

a. The Contractor shall designate an employee responsible for overall supervision of accident prevention activities. Such duties shall include: (1) assuring applicable safety requirements are (a) communicated to the workers in a language they understand (reference EM 385-1-1, September 1996, 01.A.04). It is the Contractor's responsibility to ascertain if there are workers on the job who do not speak and/or understand the English language, if such workers are employed by the prime contractor or subcontractors, at any tier, it is the prime contractor's responsibility to insure that all safety programs, signs, and tool box meetings are communicated to the workers in a language they understand, and that a bilingual employee is on site at all time. If the contractor contends that interpreters and/or bilingual signs are not required, language certification must be provided which verifies that all workers (whose native tongue is other than English) have a command of the English language sufficient to understand all direction, training and safety requirements, whether written or oral, and (b) incorporated in work methods, and (2) inspecting the work to ensure that safety measures and instructions are actually applied. The proposed safety supervisor name and qualifications shall be submitted in writing for approval to the Contracting Officer's Representative. This individual must have prior experience as a safety engineer or be able to demonstrate his/her familiarity and understanding of the safety requirements over a prescribed trial period. The safety engineer shall have the authority to act on behalf of the Contractor's general management to take whatever action is necessary to assure compliance with safety requirements. The safety supervisor is required to be on the site when work is being performed.

b. Prior to commencement of any work at a job site, a preconstruction safety meeting shall be held between the Contractor and the Corps of Engineers Area/Resident Engineer to discuss the Contractor's safety program and in particular to review the following submittals:

(1) Contracts Accident Prevention Plan: An acceptable accident prevention plan, written by the prime Contractor for the specific work and implementing in detail the pertinent requirements of EM 385-1-1, shall be submitted for Government approval.

(2) Activity Phase Hazard Analysis Plan: Prior to beginning each major phase of work, an activity hazard analysis (phase plan) shall be prepared by the Contractor for that phase of work and submitted to the Contracting Officer's Representative for approval. A phase is defined as an operation involving a type of work presenting hazards not experienced in previous operations or where a new subcontractor or work crew is to perform work. The analysis shall address the hazards for each activity performed in the phase and shall present the procedures and safeguards necessary to eliminate the hazards or reduce the risk to an acceptable level.

c. Subsequent jobsite safety meetings shall be held as follows:

(1) A safety meeting shall be held at least once a month for all supervisors on the project to review past activities, to plan ahead for new or changed operations and to establish safe working procedures to anticipated hazards. An outline report of each monthly meeting shall be submitted to the Contracting Officer's Representative.

(2) At least one safety meeting shall be conducted weekly, or whenever new crews begin work, by the appropriate field supervisors or foremen for all workers. An outline report of the meeting giving date, time, attendance, subjects discussed and who conducted it shall be maintained and copies furnished the designated authority on request.

1.4 ACCIDENTS

Chargeable accidents are to be investigated by both Contractor personnel and the Contracting Officer.

1.4.1 Accident Reporting, ENG FORM 3394

Section 1, Paragraph 01.D, OF EM 385-1-1 and the Contract Clause entitled ACCIDENT PREVENTION are amended as follows: The prime Contractor shall report on Eng Form 3394, supplied by the Contracting Officer, all injuries to his employees or subcontractors that result in lost time and all damage to property and/or equipment in excess of \$2,000 per incident. Verbal notification of such accident shall be made to the Contracting Officer within 24 hours. A written report on the above noted form shall be submitted to the Contracting Officer within 72 hours following such accidents. The written report shall include the following:

a. A description of the circumstances leading up to the accident, the cause of the accident, and corrective measures taken to prevent recurrence.

b. A description of the injury and name and location of the medical facility giving examination and treatment.

c. A statement as to whether or not the employee was permitted to return to work after examination and treatment by the doctor, and if not, an estimate or statement of the number of days lost from work. If there have been days lost from work, state whether or not the employee has been re-examined and declared fit to resume work as of the date of the report.

1.4.2 OSHA Requirements

1.4.2.1 OSHA Log

A copy of the Contractor's OSHA Log of Injuries shall be forwarded monthly to the Contracting Officer.

1.4.2.2 OSHA Inspections

Contractors shall immediately notify the Contracting Officer when an OSHA Compliance official (Federal or State representative) presents his/her credentials and informs the Contractor that the workplace will be inspected for OSHA compliance. Contractors shall also notify the Contracting Officer upon determination that an exit interview will take place upon completion of the OSHA inspection. (NABSA OCT 05, 1976)

1.5 GOVERNMENT APPROVAL

Submittals shall be in accordance with Section 01330 SUBMITTAL PROCEDURES for design build. All required submittals of items specified in this section shall be for information only, except for those items including, but not limited to, the following which shall be submitted for Government approval:

- a. Written designation of safety representative.
- b. Written project specific accident prevention plan.
- c. Written activity phase hazard analysis plan.

PART 2 PRODUCT
NOT APPLICABLE

PART 3 EXECUTION
NOT APPLICABLE

-- End of Section --

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SECTION 01200

WARRANTY REQUIREMENT

01/01

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PART 2 PRODUCTS - NOT APPLICABLE

PART 3 EXECUTION - NOT APPLICABLE

-- End of Section Table of Contents --

SECTION 01200

WARRANTY REQUIREMENT
01/01

PART 1 GENERAL

1.1 WARRANTY OF CONSTRUCTION

The Contractor shall warranty all materials and workmanship in accordance with Contract Clause (FAR 52.246-21), "WARRANTY OF CONSTRUCTION"

1.2 MANUFACTURER'S WARRANTY:

The Contractor shall provide manufacturer's warranties, when available, on all equipment for one year starting from the day of facility acceptance by the Government. Any warranty offered by the manufacturer for periods greater than one year or required by other sections of the specifications shall also be provided.

1.3 WARRANTY PAYMENT

Warranty work is a subsidiary portion of the contract work, and has a value to the Government of \$5,000. The Contractor will assign a value of that amount in the breakdown for progress payments mentioned in the Contract Clause (FAR 52.232-5) "Payments Under Fixed-Price Construction". If the Contractor fails to respond to warranty items as provided in paragraph CONTRACTOR'S RESPONSE TO WARRANTY SERVICE REQUIREMENTS below, the Government may elect to acquire warranty repairs through other sources and, if so, shall backcharge the Contractor for the cost of such repairs. Such backcharges shall be accomplished under the Contract Clause (FAR 52.243-4) "CHANGES" of the contract through a credit modification(s).

1.4 PERFORMANCE BOND:

The Contractor's Performance Bond will remain effective throughout the construction warranty period and warranty extensions.

1.4.1 Failure to Commence

In the event the Contractor or his designated representative(s) fail to commence and diligently pursue any work required under this clause, and in a manner pursuant to the requirements thereof, the Contracting Officer shall have the right to demand that said work be performed under the Performance Bond by making written notice on the surety. If the surety fails or refuses to perform the obligation it assumed under the Performance Bond, the Contracting Officer shall have the work performed by others, and after completion of the work, may demand reimbursement of any or all expenses incurred by the Government while performing the work, including, but not limited to administrative expenses.

1.5 PRE-WARRANTY CONFERENCE:

Prior to contract completion and at a time designated by the Contracting Officer, the Contractor shall meet with the Contracting Officer to develop a mutual understanding with respect to the requirements of this

specification. Communication procedures for Contractor notification of warranty defects, priorities with respect to the type of defect, reasonable time required for Contractor response, and other details deemed necessary by the Contracting Officer for the execution of the construction warranty shall be reviewed at this meeting. The Contractor shall provide names, addresses, and telephone numbers of all subcontractors, equipment suppliers, or manufacturers with specific designation of their area of responsibilities if they are to be contacted directly on warranty corrections. This point of contact will be located within the local service area of the warranted construction, will be continuously available, and will be responsive to Government inquiry on warranty work action and status. Minutes of the meeting will be prepared by the Government and signed by both, the Contractor and the Contracting Officer. The minutes shall become part of the contract file.

1.6 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES FOR DESIGN BUILD:

SD-04 Samples

Sample Tags.

To identify the warranty for all Contractor and Government furnished equipment which the Contractor installs.

1.7 ADDITIONAL REQUIREMENTS

1.7.1 Roof Survey

The Contractor shall during the ninth (9) month of the warranty period conduct an infrared roof survey on any project involving a membrane roofing system. This survey will be conducted in accordance with ASTM C1153-90, "Standard Practice for the Location of Wet Insulation in Roofing Systems Using Infrared Imaging". Contractor shall be required to replace all damaged materials and to locate and repair sources of moisture penetration.

1.7.2 Equipment Warranty Identification Tags:

The Contractor shall provide warranty identification tags on all Contractor and Government furnished equipment which he has installed.

1.7.2.1 Format and Size for Tags

The tags shall be similar in format and size to the exhibits provided by this specification, they shall be suitable for interior and exterior locations, resistant to solvents, abrasion, and to fading caused by sunlight, precipitation, etc. . These tags shall have a permanent pressure-sensitive adhesive back, and they shall be installed in a position that is easily (or most easily) noticeable. Contractor furnished equipment that has differing warranties on its components will have each component tagged.

1.7.2.2 Sample Tags

Sample tags shall be filled out representative of how the Contractor will complete all other tags. These tags shall be submitted to the Government.

1.7.2.3 Tags for Warranted Equipment:

The tag for this equipment shall be similar to the following. Exact format and size will be as approved.

EQUIPMENT WARRANTY CONTRACTOR FURNISHED EQUIPMENT	
MFG: _____	MODEL NO.: _____
SERIAL NO.: _____	CONTRACT NO.: _____
CONTRACTORS NAME: _____	
CONTRACTOR WARRANTY EXPIRES: _____	
MFG WARRANTY (IES) EXPIRE: _____	

EQUIPMENT WARRANTY GOVERNMENT FURNISHED EQUIPMENT	
MFG: _____	MODEL NO.: _____
SERIAL NO.: _____	CONTRACT NO.: _____
DATE EQUIPMENT PLACED IN SERVICE: _____	
MFG WARRANTY (IES) EXPIRES: _____	

1.7.2.4 Execution

The Contractor will complete the required information on each tag and install these tags on the equipment by the time of and as a condition of final acceptance of the equipment. All tags shall be mechanically attached to the equipment as directed by the Contracting Officer.

1.7.2.5 Equipment Warranty Tag Replacement.

The contractor shall provide new tags on repaired or replaced equipment during the warranty period. The tag shall be identical to the original tag, except that the Contractor's warranty expiration date shall be updated to show the correct warranty expiration date.

1.8 CONTRACTOR'S RESPONSE TO WARRANTY SERVICE REQUIREMENTS.

1.8.1 Notification to Warranty Service Requirements

Following oral or written notification by authorized representative of the installation designated in writing by the Contracting Officer, the Contractor shall respond to warranty service requirements in accordance with the "Warranty Service Priority List" and the three categories of priorities listed below.

1.8.1.1 Categories of Priorities

- a. First Priority Code 1: Perform on site inspection to evaluate situation, determine course of action, initiate work within 24 hours and work continuously to completion or relief.
- b. Second Priority Code 2: Perform on site inspection to evaluate situation, determine course of action, initiate work within 48 hours and work continuously to completion or relief.
- c. Third Priority Code 3: All other work to be initiated within 5 work days end work continuously to completion or relief.

1.8.1.2 Warranty Service Priority List

ELECTRICAL:

Code 1:

- a. Power failure (entire area or any building operational after 1600 hours).
- b. Traffic control devices.
- c. Security lights.

Code 2:

- a. Power failure (no Power to a room or part of building),
- b. Receptacle and lights.
- c. Fire alarm systems.

GAS

Code 1

- a. Leaks and breaks.
- b. No gas to family housing unit or cantonment area.

1.8.2 Availability of Required Parts

Should parts be required to complete the work and the parts are not immediately available the Contractor shall have a maximum of 12 hours after arrival at the job site to provide authorized representative of the installation with firm written plan for emergency alternatives and temporary repairs for Government participation with the Contractor to provide emergency relief until the required parts are available on site for the Contractor to perform permanent warranty repair. The Contractors plan shall include a firm date and time that the required parts shall be available on site to complete the permanent warranty repair.

PART 2 PRODUCTS - NOT APPLICABLE

PART 3 EXECUTION - NOT APPLICABLE

-- End of Section --

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SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)

08/01

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- 1.2 QCS SOFTWARE
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SECTION 01312A

QUALITY CONTROL SYSTEM (QCS)

08/01

PART 1 GENERAL

1.1 GENERAL

The Government will use the Resident Management System for Windows (RMS) to assist in its monitoring and administration of this contract. The Contractor shall use the Government-furnished Construction Contractor Module of RMS, referred to as QCS, to record, maintain, and submit various information throughout the contract period. This joint Government-Contractor use of RMS and QCS will facilitate electronic exchange of information and overall management of the contract. QCS provides the means for the Contractor to input, track, and electronically share information with the Government in the following areas:

- Administration
- Finances
- Quality Control
- Submittal Monitoring
- Scheduling
- Import/Export of Data

1.1.1 Correspondence and Electronic Communications

For ease and speed of communications, both Government and Contractor will, to the maximum extent feasible, exchange correspondence and other documents in electronic format. Correspondence, pay requests and other documents comprising the official contract record shall also be provided in paper format, with signatures and dates where necessary. Paper documents will govern, in the event of discrepancy with the electronic version.

1.1.2 Other Factors

Particular attention is directed to Contract Clause, PROJECT SCHEDULE, Section 01330, SUBMITTAL PROCEDURES for design build, and have a direct relationship to the reporting to be accomplished through QCS. Also, there is no separate payment for establishing and maintaining the QCS database; all costs associated therewith shall be included in the contract pricing for the work.

1.2 QCS SOFTWARE

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. Prior to the Pre-Construction Conference, the Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on 3-1/2 inch high-density diskettes or CD-ROM. Any program updates of QCS will be made

available to the Contractor via the Government RMS Website as they become available.

1.3 SYSTEM REQUIREMENTS

The following listed hardware and software is the minimum system configuration that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 200 MHz Pentium or higher processor

32+ MB RAM

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader

Color monitor

Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory.

Connection to the Internet, minimum 28 BPS

Software

MS Windows 95 or newer version operating system (MS Windows NT 4.0 or newer is recommended)

Word Processing software compatible with MS Word 97 or newer

Internet browser

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) compatible with MS Outlook

1.4 RELATED INFORMATION

1.4.1 QCS User Guide

After contract award, the Contractor shall download instructions for the installation and use of QCS from the Government RMS Internet Website; the Contractor can obtain the current address from the Government. In case of justifiable difficulties, the Government will provide the Contractor with a CD-ROM containing these instructions.

1.4.2 Contractor Quality Control (CQC) Training

The use of QCS will be discussed with the Contractor's QC System Manager during the mandatory CQC Training class.

1.5 CONTRACT DATABASE

Prior to the pre-construction conference, the Government shall provide the Contractor with basic contract award data to use for QCS. The Government will provide data updates to the Contractor as needed, generally by files attached to E-mail. These updates will generally consist of submittal reviews, correspondence status, QA comments, and other administrative and QA data.

1.6 DATABASE MAINTENANCE

The Contractor shall establish, maintain, and update data for the contract in the QCS database throughout the duration of the contract. The Contractor shall establish and maintain the QCS database at the Contractor's site office. Data updates to the Government shall be submitted by E-mail with file attachments, e.g., daily reports, schedule updates, payment requests. If permitted by the Contracting Officer, a data diskette or CD-ROM may be used instead of E-mail (see Paragraph DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM). The QCS database typically shall include current data on the following items:

1.6.1 Administration

1.6.1.1 Contractor Information

The database shall contain the Contractor's name, address, telephone numbers, management staff, and other required items. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver Contractor administrative data in electronic format via E-mail.

1.6.1.2 Subcontractor Information

The database shall contain the name, trade, address, phone numbers, and other required information for all subcontractors. A subcontractor must be listed separately for each trade to be performed. Each subcontractor/trade shall be assigned a unique Responsibility Code, provided in QCS. Within 14 calendar days of receipt of QCS software from the Government, the Contractor shall deliver subcontractor administrative data in electronic format via E-mail.

1.6.1.3 Correspondence

All Contractor correspondence to the Government shall be identified with a serial number. Correspondence initiated by the Contractor's site office shall be prefixed with "S". Letters initiated by the Contractor's home (main) office shall be prefixed with "H". Letters shall be numbered starting from 0001. (e.g., H-0001 or S-0001). The Government's letters to the Contractor will be prefixed with "C".

1.6.1.4 Equipment

The Contractor's QCS database shall contain a current list of equipment planned for use or being used on the jobsite, including the most recent and planned equipment inspection dates.

1.6.1.5 Management Reporting

QCS includes a number of reports that Contractor management can use to track the status of the project. The value of these reports is reflective

of the quality of the data input, and is maintained in the various sections of QCS. Among these reports are: Progress Payment Request worksheet, QA/QC comments, Submittal Register Status, Three-Phase Inspection checklists.

1.6.1.6 EM 385-1-1, Corps of Engineers Safety Manual and QCS Linkage

Upon request, the Contractor can obtain a copy of the current version of the Safety Manual, EM 385-1-1, on CD or visit ["http://www.usace.army.mil/inet/usace-docs/ent-manuals/em385-1-1/entire.pdf"](http://www.usace.army.mil/inet/usace-docs/ent-manuals/em385-1-1/entire.pdf). Data on the CD will be accessible through QCS, or in stand-alone mode.

1.6.2 Finances

1.6.2.1 Pay Activity Data

The QCS database shall include a list of pay activities that the Contractor shall develop in conjunction with the construction schedule. The sum of all pay activities shall be equal to the total contract amount, including modifications. Pay activities shall be grouped by Contract Line Item Number (CLIN), and the sum of the activities shall equal the amount of each CLIN. The total of all CLINs equals the Contract Amount.

1.6.2.2 Payment Requests

All progress payment requests shall be prepared using QCS. The Contractor shall complete the payment request worksheet and include it with the payment request. The work completed under the contract, measured as percent or as specific quantities, shall be updated at least monthly. After the update, the Contractor shall generate a payment request report using QCS. The Contractor shall submit the payment requests with supporting data by E-mail with file attachment(s). If permitted by the Contracting Officer, a data diskette may be used instead of E-mail. A signed paper copy of the approved payment request is also required, which shall govern in the event of discrepancy with the electronic version.

1.6.3 Quality Control (QC)

QCS provides a means to track implementation of the 3-phase QC Control System, prepare daily reports, identify and track deficiencies, document progress of work, and support other contractor QC requirements. The Contractor shall maintain this data on a daily basis. Entered data will automatically output to the QCS generated daily report. The Contractor shall provide the Government a Contractor Quality Control (CQC) Plan within the time required in Section 01451A, CONTRACTOR QUALITY CONTROL. Within seven calendar days of Government acceptance, the Contractor shall submit a data diskette or CD-ROM reflecting the information contained in the accepted CQC Plan: schedule, pay activities, features of work, submittal register, QC requirements, and equipment list.

1.6.3.1 Daily Contractor Quality Control (CQC) Reports.

QCS includes the means to produce the Daily CQC Report. The Contractor may use other formats to record basic QC data. However, the Daily CQC Report generated by QCS shall be the Contractor's official report. Data from any supplemental reports by the Contractor shall be summarized and consolidated onto the QCS-generated Daily CQC Report. Daily CQC Reports shall be submitted as required by Section 01451A, CONTRACTOR QUALITY CONTROL. Reports shall be submitted electronically to the Government using E-mail or diskette within 24 hours after the date covered by the report. Use of

either mode of submittal shall be coordinated with the Government representative. The Contractor shall also provide the Government a signed, printed copy of the daily QQC report.

1.6.3.2 Deficiency Tracking.

The Contractor shall use QCS to track deficiencies. Deficiencies identified by the Contractor will be numerically tracked using QC punch list items. The Contractor shall maintain a current log of its QC punch list items in the QCS database. The Government will log the deficiencies it has identified using its QA punch list items. The Government's QA punch list items will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of both QC and QA punch list items.

1.6.3.3 Three-Phase Control Meetings

The Contractor shall maintain scheduled and actual dates and times of preparatory and initial control meetings in QCS.

1.6.3.4 Accident/Safety Tracking.

The Government will issue safety comments, directions, or guidance whenever safety deficiencies are observed. The Government's safety comments will be included in its export file to the Contractor. The Contractor shall regularly update the correction status of the safety comments. In addition, the Contractor shall utilize QCS to advise the Government of any accidents occurring on the jobsite. This brief supplemental entry is not to be considered as a substitute for completion of mandatory reports, e.g., ENG Form 3394 and OSHA Form 200.

1.6.3.5 Features of Work

The Contractor shall include a complete list of the features of work in the QCS database. A feature of work may be associated with multiple pay activities. However, each pay activity (see subparagraph "Pay Activity Data" of paragraph "Finances") will only be linked to a single feature of work.

1.6.3.6 QC Requirements

The Contractor shall develop and maintain a complete list of QC testing, transferred and installed property, and user training requirements in QCS. The Contractor shall update all data on these QC requirements as work progresses, and shall promptly provide this information to the Government via QCS.

1.6.4 Submittal Management

The Government will provide the initial submittal register, ENG Form 4288, SUBMITTAL REGISTER, in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Government will be included in its export file to the Contractor. The Contractor shall use QCS to track and transmit all submittals. ENG Form 4025, submittal transmittal form, and the submittal register update, ENG Form 4288, shall be produced using QCS. RMS will be used to update, store and exchange submittal registers and transmittals, but will not be used for storage of actual submittals.

1.6.5 Schedule

The Contractor shall develop a construction schedule consisting of pay activities, in accordance with Contract Clause "Schedules for Construction Contracts", or Section 01320A, PROJECT SCHEDULE, as applicable. This schedule shall be input and maintained in the QCS database either manually or by using the Standard Data Exchange Format (SDEF) (see Section 01320A PROJECT SCHEDULE). The updated schedule data shall be included with each pay request submitted by the Contractor.

1.6.6 Import/Export of Data

QCS includes the ability to export Contractor data to the Government and to import submittal register and other Government-provided data, and schedule data using SDEF.

1.7 IMPLEMENTATION

Contractor use of QCS as described in the preceding paragraphs is mandatory. The Contractor shall ensure that sufficient resources are available to maintain its QCS database, and to provide the Government with regular database updates. QCS shall be an integral part of the Contractor's management of quality control.

1.8 DATA SUBMISSION VIA COMPUTER DISKETTE OR CD-ROM

The Government-preferred method for Contractor's submission of updates, payment requests, correspondence and other data is by E-mail with file attachment(s). For locations where this is not feasible, the Contracting Officer may permit use of computer diskettes or CD-ROM for data transfer. Data on the disks or CDs shall be exported using the QCS built-in export function. If used, diskettes and CD-ROMs will be submitted in accordance with the following:

1.8.1 File Medium

The Contractor shall submit required data on 3-1/2 inch double-sided high-density diskettes formatted to hold 1.44 MB of data, capable of running under Microsoft Windows 95 or newer. Alternatively, CD-ROMs may be used. They shall conform to industry standards used in the United States. All data shall be provided in English.

1.8.2 Disk or CD-ROM Labels

The Contractor shall affix a permanent exterior label to each diskette and CD-ROM submitted. The label shall indicate in English, the QCS file name, full contract number, contract name, project location, data date, name and telephone number of person responsible for the data.

1.8.3 File Names

The Government will provide the file names to be used by the Contractor with the QCS software.

1.9 MONTHLY COORDINATION MEETING

The Contractor shall update the QCS database each workday. At least monthly, the Contractor shall generate and submit an export file to the

Government with schedule update and progress payment request. As required in Contract Clause "Payments", at least one week prior to submittal, the Contractor shall meet with the Government representative to review the planned progress payment data submission for errors and omissions. The Contractor shall make all required corrections prior to Government acceptance of the export file and progress payment request. Payment requests accompanied by incomplete or incorrect data submittals will be returned. The Government will not process progress payments until an acceptable QCS export file is received.

1.10 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the requirements of this specification. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the work site, shall be deemed sufficient for the purpose of notification.

-- End of Section --

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SECTION 01330

SUBMITTAL PROCEDURES FOR DESIGN BUILD
03/03

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION (SD)

1.1.1 Design Submittals

Administrative Contracting Officer review is required for all design. The Government will review all 50% 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

SD-01 Preconstruction Submittals

Construction Progress Schedule.
Submittal schedule/register.
Work plan.
Quality control plan.
Environmental protection plan.

SD-02 Shop Drawings

Drawings, diagrams and schedules specifically prepared to illustrate some portion of the work.

Diagrams and instructions from a manufacturer or fabricator for use in producing the product and as aids to the Contractor for integrating the product or system into the project.

Drawings prepared by or for the Contractor to show how multiple systems and interdisciplinary work will be coordinated.

SD-03 Product Data

Catalog cuts, illustrations, schedules, diagrams, performance charts, instructions and brochures illustrating size, physical appearance and other characteristics of materials or equipment for some portion of the work.

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

SD-04 Samples

Physical examples of materials, equipment or workmanship that illustrate functional and aesthetic characteristics of a material or

product and establish standards by which the work can be judged.

Color samples from the manufacturer's standard line (or custom color samples if specified) to be used in selecting or approving colors for the project.

Field samples and mock-ups constructed on the project site establish standards by which the ensuring work can be judged. Includes assemblies or portions of assemblies which are to be incorporated into the project and those which will be removed at conclusion of the work.

SD-05 Design Data

Calculations, mix designs, analyses or other data pertaining to a part of work.

SD-06 Test Reports

Report signed by authorized official of testing laboratory that a material, product or system identical to the material, product or system to be provided has been tested in accord with specified requirements. (Testing must have been within three years of date of contract award for the project.)

Report which includes findings of a test required to be performed by the Contractor on an actual portion of the work or prototype prepared for the project before shipment to job site.

Report which includes finding of a test made at the job site or on sample taken from the job site, on portion of work during or after installation.

Investigation reports

Daily checklists

Final acceptance test and operational test procedure

SD-07 Certificates

Statements signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements. Must be dated after award of project contract and clearly name the project.

Document required of Contractor, or of a supplier, installer or subcontractor through Contractor, the purpose of which is to further quality of orderly progression of a portion of the work by documenting procedures, acceptability of methods or personnel qualifications.

Confined space entry permits.

SD-08 Manufacturer's Instructions

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

SD-09 Manufacturer's Field Reports

Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

Factory test reports.

SD-10 Operation and Maintenance Data

Data that is furnished by the manufacturer, or the system provider, to the equipment operating and maintenance personnel. This data is needed by operating and maintenance personnel for the safe and efficient operation, maintenance and repair of the item.

1.2 SUBMITTAL CLASSIFICATION

1.2.1 Designer of Record Approved

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 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.

1.2.2 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. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction", they are considered to be "shop drawings".

1.2.3 Government Reviewed Design or 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.

1.2.4 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.

1.3 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's Representative, no resubmittal for the purpose of substituting materials or equipment will be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 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 an 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 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 Contract Clause "Changes" to the Contracting Officer's Representative.

1.5 WITHHOLDING OF PAYMENT

No payment for materials incorporated in the work will be made if all required Designer 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 PRODUCT

NOT APPLICABLE

PART 3 EXECUTION

3.1 DESIGN SUBMITTALS

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

3.2 CONSTRUCTION SUBMITTALS

3.2.1 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.

3.2.2 Submittal Register (ENFG 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. Use the list to prepare ENG Form 4288 Submittal Register or a computerized equivalent. The list may not be all inclusive and additional submittals may be required by other parts of the contract. The 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 Notice to Proceed. 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.

3.2.3 Scheduling

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.

3.2.4 Transmittal Form (ENG Form 4025)

The sample transmittal form (ENG Form 4025) attached to this section 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.

3.2.5 Submittal Procedure

Make submittals as follows:

3.2.5.1 Procedures

The Government will further discuss detailed submittal procedures with the Contractor at the pre-construction conference.

3.2.5.2 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.

3.2.6 Control of Submittals

The Contractor shall carefully control his 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 not threatened.

3.2.7 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 six (6) copies of the submittal and return two (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.

3.2.8 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; 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. The Government will retain four (4) copies of information only submittals.

3.2.9 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):

<p>CONTRACTOR</p> <p>(Firm Name)</p> <p>_____ Approved</p> <p>_____ Approved with corrections as noted on submittal data and/or attached sheets(s).</p> <p>SIGNATURE: _____</p> <p>TITLE: _____ DESIGNER OF RECORD _____</p> <p>DATE: _____</p>

3.3 Certificate of Compliance (May 1969)

Any Certificate required for demonstrating proof of compliance of materials with specification requirements shall be executed in four (4) copies. Each certificate shall be signed by an official authorized to certify in behalf on the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements. (CENAB)

-- End of Section --

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION						CONTRACTOR											
Bolling Air Force Base																	
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01000	SD-01 Preconstruction Submittals														
			Title Evidence														
			Invoice Copies														
			Photographs	1.11													
			SD-03 Product Data														
			Cost or Pricing Data	1.7													
			Equipment Data	1.8													
			SD-10 Operation and Maintenance Data														
			O and M Data	1.9													
		01050	SD-01 Preconstruction Submittals														
			Shut Down Utility Services	1.5.2	G AR												
			Checklist	1.5.4	G AR												
		01060	SD-01 Preconstruction Submittals														
			Safety Supervisor	1.3	G AR												
			SD-07 Certificates														
			Language Certification	1.3													
			SD-09 Manufacturer's Field Reports														
			Activity Phase Hazard Analysis	1.3	G AR												
			Plan														
			Outline Report														
			OSHA Log														
		01200	SD-04 Samples														
			Sample Tags	1.7.2.2													
		01459	SD-01 Preconstruction Submittals														

SUBMITTAL REGISTER

CONTRACT NO.

TITLE AND LOCATION Bolling Air Force Base						CONTRACTOR											
ACTIVITY NO	TRANSMITTAL NO	SPEC SECT	DESCRIPTION ITEM SUBMITTED	PARAGRAPH	GOVT CLASSIFICATION REVW	CONTRACTOR: SCHEDULE DATES			CONTRACTOR ACTION		APPROVING AUTHORITY				MAILED TO CONTR/ DATE RCD FRM APPR AUTH	REMARKS	
						SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	ACTION CODE	DATE OF ACTION	DATE FWD TO APPR AUTH/ DATE RCD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RCD FROM OTH REVIEWER	ACTION CODE			DATE OF ACTION
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		01459	CQC Plan	3.2	G AR												
			Request		G AR												
			Minutes														
			CQC Mgr Qualification														
			SD-04 Samples														
			CQC Mgr Qualification		G AR												
			SD-05 Design Data														
			Change Notification														
			Punchlist	3.9.1													
			SD-06 Test Reports														
			Tests	3.8.1													
			Test Reports														
			Tests Performed														
			QC Records		G AR												
			SD-07 Certificates														
			CQC Plan	3.2	G AR												
			CQC Mgr Qualification		G AR												
		01510	SD-02 Shop Drawings														
			Temporary Electrical Work	1.5	G AR												
		01561	SD-05 Design Data														
			Facility Plan	1.9.4	G AR												
			Temporary Plan	1.9.5	G AR												
		01720	SD-11 Closeout Submittals														
			Progress Prints		G AR												
			Final Requirements	1.7	G AR												
			CADD Files														

INSTRUCTIONS

1. Section I will be initiated by the Contractor in the required number of copies.
2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.
3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.
4. Submittals requiring expeditious handling will be submitted on a separate form.
5. Separate transmittal form will be used for submittals under separate sections of the specifications.
6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".
7. Form is self-transmittal, letter of transmittal is not required.
8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.
9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

- | | | | |
|------|--|-------|---|
| A -- | Approved as submitted. | E -- | Disapproved (See attached). |
| B -- | Approved, except as noted on drawings. | F -- | Receipt acknowledged. |
| C -- | Approved, except as noted on drawings.
Refer to attached sheet resubmission required. | FX -- | Receipt acknowledged, does not comply
as noted with contract requirements. |
| D -- | Will be returned by separate correspondence. | G -- | Other (Specify) |

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

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SECTION 01415

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03/97

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 - 1.3.1 Hard Metric
 - 1.3.2 Soft Metric
 - 1.3.3 Neutral
- 1.4 COORDINATION
- 1.5 RELATIONSHIP TO SUBMITTALS

-- End of Section Table of Contents --

SECTION 01415

METRIC MEASUREMENTS
03/97

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 basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 380	(1993) Practice for Use of the International System of Units (SI)
ASTM E 621	(1994) Practice for Use of Metric (SI) Units in Building Design and Construction

1.2 GENERAL

This project includes metric units of measurements. The metric units used are the International System of Units (SI) developed and maintained by the General Conference on Weights and Measures (CGPM); the name International System of Units and the international abbreviation SI were adopted by the 11th CGPM in 1960. A number of circumstances require that both metric SI units and English inch-pound (I-P) units be included in a section of the specifications. When both metric and I-P measurements are included, the section may contain measurements for products that are manufactured to I-P dimensions and then expressed in mathematically converted metric value (soft metric) or, it may contain measurements for products that are manufactured to an industry recognized rounded metric (hard metric) dimensions but are allowed to be substituted by I-P products to comply with the law. Dual measurements are also included to indicate industry and/or Government standards, test values or other controlling factors, such as the code requirements where I-P values are needed for clarity or to trace back to the referenced standards, test values or codes.

1.3 USE OF MEASUREMENTS

Measurements shall be either in SI or I-P units as indicated, except for soft metric measurements or as otherwise authorized. When only SI or I-P measurements are specified for a product, the product shall be procured in the specified units (SI or I-P) unless otherwise authorized by the Contracting Officer. The Contractor shall be responsible for all associated labor and materials when authorized to substitute one system of units for another and for the final assembly and performance of the specified work and/or products.

1.3.1 Hard Metric

A hard metric measurement is indicated by an SI value with no expressed correlation to an I-P value, i.e., where an SI value is not an exact mathematical conversion of an I-P value, such as the use of 100 mm in lieu of 4 inches. Hard metric measurements are often used for field data such as distance from one point to another or distance above the floor.

Products are considered to be hard metric when they are manufactured to metric dimensions or have an industry recognized metric designation.

1.3.2 Soft Metric

- a. A soft metric measurement is indicated by an SI value which is a mathematical conversion of the I-P value shown in parentheses (e.g. 38.1 mm (1-1/2 inches)). Soft metric measurements are used for measurements pertaining to products, test values, and other situations where the I-P units are the standard for manufacture, verification, or other controlling factor. The I-P value shall govern while the metric measurement is provided for information.
- b. A soft metric measurement is also indicated for products that are manufactured in industry designated metric dimensions but are required by law to allow substitute I-P products. These measurements are indicated by a manufacturing hard metric product dimension followed by the substitute I-P equivalent value in parentheses (e.g., 190 x 190 x 390 mm (7-5/8 x 7-5/8 x 15-5/8 inches)).

1.3.3 Neutral

A neutral measurement is indicated by an identifier which has no expressed relation to either an SI or an I-P value (e.g., American Wire Gage (AWG) which indicates thickness but in itself is neither SI nor I-P).

1.4 COORDINATION

Discrepancies, such as mismatches or product unavailability, arising from use of both metric and non-metric measurements and discrepancies between the measurements in the specifications and the measurements in the drawings shall be brought to the attention of the Contracting Officer for resolution.

1.5 RELATIONSHIP TO SUBMITTALS

Submittals for Government approval or for information only shall cover the SI or I-P products actually being furnished for the project. The Contractor shall submit the required drawings and calculations in the same units used in the contract documents describing the product or requirement unless otherwise instructed or approved. The Contractor shall use ASTM E 380 and ASTM E 621 as the basis for establishing metric measurements required to be used in submittals.

-- End of Section --

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SECTION 01459

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03/03

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SECTION 01459

CONTRACTOR QUALITY CONTROL - DESIGN BUILD CONSTRUCTION
03/03

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 basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740 (2001) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

ASTM E 329 (2000b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

No separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Price Schedule.

1.3 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 01330 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

CQC Plan; G AR.

Identifies personnel, procedures, control, instructions, test, records, and forms to be used.

Request; G AR.

The requesting of specialized individuals in specific disciplines to perform quality control.

Minutes.

Prepared by the Government and signed by both the Contractor and the Contracting Officer and shall become a part of the contract file.

CQC Mgr Qualification.

The evaluation of the project to determine the level of CQC System Manager required.

SD-04 Samples

CQC Mgr Qualification; G AR.

The evaluation of the project to determine the level of CQC System Manager required.

SD-05 Design Data

Change Notification.

Any changes made by the Contractor.

Punchlist.

Near the completion of all work, the CQC System Manager shall prepare a list of items which do not conform to the approved drawings and specifications.

SD-06 Test Reports

Tests.

Specified or required tests shall be done by the Contractor to verify that control measures are adequate.

Test Reports.

Results of tests taken..

Tests Performed.

An information copy provided directly to the Contracting Officer.

QC Records; G AR.

Provide factual evidence that required quality control activities and/or tests have been performed.

SD-07 Certification

CQC Plan; G AR.

Identifies personnel, procedures, control, instructions, test, records, and forms to be used..

CQC Mgr Qualification; G AR.

The evaluation of the project to determine the level of CQC System Manager required.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL REQUIREMENTS

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause titled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product which complies with the contract requirements. The system shall cover all design and construction operations, both onsite and offsite, and shall be keyed to the proposed design and construction sequence. The site project superintendent 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 site project superintendent in this context shall mean the highest level manager at the site responsible for the overall construction activities, including quality and production. The site project superintendent shall maintain a physical presence at the site at all times, except as otherwise acceptable to the Contracting Officer.

3.2 CQC PLAN

3.2.1 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." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 60 days of operation. Design and construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Design Quality Control (DQC) Plan

The Contractor's DQC Plan shall provide and maintain an effective quality control program, which will assure that all services required by this design-build contract are performed and provided in a manner that meets professional architectural and engineering quality standards. As a minimum, competent, independent reviewers identified in the DQC Plan shall review all documents. The same element that produced the product shall not perform the independent technical review (ITR). In addition, the DQC Plan shall incorporate the Lessons Learned Databases provided by the Government. The Contractor shall correct errors and deficiencies in the design documents prior to submitting them to the Government.

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. If the schedule is

changed, the Contractor shall submit a revised schedule reflecting the change within seven calendar days. The Contractor shall include in the DQC Plan the discipline-specific checklists to be used during the design and quality control of each submittal. The completed checklists shall be submitted at each design phase as part of the project documentation. Example checklists can be found in ER 1110-1-12.

The DQC Plan shall be implemented by an assigned person with the Contractor's organization who shall be cognizant of and assure that all documents on the project have been coordinated. This individual shall be a person who has verifiable engineering or architectural design experience and is a registered professional engineer or architect. The Contractor shall notify the Contracting Officer, in writing, of the name of the individual and the name of an alternate person assigned to the position.

The Contracting Officer will notify the Contractor, in writing, of the acceptance of the DQC Plan. After acceptance, any changes proposed by the Contractor are subject to the acceptance of the Contracting Officer.

3.2.3 Content of the 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 (The design QC Plan shall incorporate appropriate portions of these requirements, applicable to design activities):

- a. describe 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 construction work. The staff shall include a CQC System Manager who shall report to the site project superintendent.
- b. List the name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.
- c. Include a copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, 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. Furnish copies of these letters to the Government.
- d. Describe 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 FOR DESIGN BUILD.
- e. Describe 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. (The Contracting Officer must approve Laboratory facilities.)

- f. Describe procedures for tracking preparatory, initial, and follow-up control phases for construction and control, verification, and acceptance tests including documentation.
- g. Describe procedures for tracking design and construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.
- h. Describe reporting procedures, including proposed reporting formats. The Contractor shall utilize the Contractor Module of a Government-furnished software program titled "RMS" (Resident Management System). See paragraph, IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM FOR CONTRACTOR QUALITY CONTROL OF CONTRACT, of this section for additional details.
- i. Include a list of the definable features of work. A definable feature of work is a task which is separate and distinct from other tasks, has separate control requirements, and may be identified by different trades or disciplines, or it may 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 are frequently more than one definable features under a particular section. This list will be agreed upon during the coordination meeting. This list may be developed as design progresses, but prior to construction of that feature.
- j. Furnish a list of tests to be performed as a part of the CQC Plan. The list shall give the test name, frequency, specification paragraph containing the test requirement, the personnel and laboratory responsible for each type of test, and an estimate of the number of tests required. Develop this list as design progresses, but prior to construction of that feature.
- k. RMS will assist in tracking and reporting for the above requirements. Sample forms generated from the software package shall be used as part of the CQC Plan.

3.2.4 Acceptance of Plan

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.

3.2.5 Notification of Changes

After acceptance of the CQC Plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven (7) calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 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 10 calendar days prior to the Coordination Meeting. 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. The Government will prepare the minutes of the meeting. Both the Contractor and the Contracting Officer shall sign them. 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.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 General

The requirements for the CQC organization are a CQC System Manager, a Design Quality Manager and sufficient number of additional qualified personnel to ensure contract compliance. The Contractor's CQC organization shall maintain a presence at the site at all times during progress of the work and which shall have complete authority to take any action necessary to ensure contract compliance. The CQC staff shall be subject to acceptance by the Contracting Officer.

3.4.2 CQC System Manager

The Contractor shall identify as CQC System Manager an individual within the on site work organization who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. The CQC System Manager shall be a graduate engineer, graduate architect, or a graduate of construction management, with a minimum of 3 years construction experience on construction similar to this contract or a construction person with a minimum of 5 years in related work. This CQC System Manager shall be on the site at all times during construction and shall be employed by the prime Contractor. The CQC System Manager shall be assigned no other duties. An alternate for the CQC System Manager will be identified in the plan to serve in the event of the System Manager's absence. The requirements for the alternate will be the same as for the designated CQC Manager.

3.4.3 Additional Requirement

In addition to the above experience and/or education requirements the CQC System Manager shall have completed the course entitled "Construction Quality Management for Contractors" within 45 calendar days after NTP is a mandatory requirement for the position of the Quality Control Systems Manager. Certification is good for five (5) years at which time re-training is required. The Contractor's QC Systems Manager may be appointed and serve fully in that capacity pending certification. If the CQC Systems Manager fails to successfully complete the training, the Contractor should promptly appoint a new CQSM who shall then attend the next available course. The course is nine (9) hours long (1 day). The Construction Quality Management Course (CQMC) will be taught at least nine (9) times per year by the Baltimore District Corps of Engineers, at various

locations around Baltimore and Washington, D.C., or at another site if conditions warrant. The CQMC cost will be borne by the Contractor and is one hundred and thirty five dollars (\$135.00) per course, per person. Payment shall be made by check payable to either sponsors of the course; Associated Builders and Contractors, Inc., (ABC) 14120 Park Long Court, Suite 111, Chantilly, Virginia 20151 (Phone: 703-968-6205), or to the Associated General Contractors of America (GCA), Maryland Chapter, 1301 York Road, Heaver Plaza, Suite 202, Lutherville, Maryland 21093 (Phone: 410-321-7870) prior to the start of the course. Reservations to attend the course should be made directly to the organization sponsoring the course they attend. The Contractor has forty-five (45) calendar days to attend the course after the issuance of the NTP. The Contractor shall contact the Contracting Officer upon award of the contract arrangements for the course.

3.4.4 Organizational Changes

The Contractor shall obtain Contracting Officer's acceptance before replacing any member of the CQC staff. Requests shall include the names, qualifications, duties, and responsibilities of each proposed replacement. Upon acceptance of any changes, the Contractor shall revise the CQC plan to accurately reflect the changes. The CQC plan shall be kept current at all times during the life of the contract.

3.5 SUBMITTALS

Submittals, shall be made as specified in Section 01330 SUBMITTAL PROCEDURES FOR DESIGN BUILD. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

3.6 IMPLEMENTATION OF GOVERNMENT RESIDENT MANAGEMENT SYSTEM FOR CQC OF CONTRACT

The government will use software entitled "Resident Management System For Windows ("RMS-W") to assist in its monitoring and administration of this contract. The Contractor shall utilize a Government-furnished contractor module of RMS, called "QCS" to record, maintain and submit various information to the Government throughout design and construction. This joint Government-Contractor use of RMS/QCS will facilitate the electronic exchange of information and overall management of the contract. QCS provides the means for the contractor to input, track, and electronically share information with the government in the following areas:

- Administration
- Finances
- Daily Progress Reports
- Quality Control Reports
- Submittal Monitoring
- Scheduling
- Import/Export of data

QCS is a Windows-based program that can be run on a stand-alone personal computer or on a network. The Government will make available the QCS software to the Contractor after award of the construction contract. The Contractor shall be responsible to download, install and use the latest version of the QCS software from the Government's RMS Internet Website. Upon specific justification and request by the Contractor, the Government can provide QCS on (3-1/2 inch) high-density diskettes or CD-ROM. Any

program updates of QCS will be made available to the Contractor via the Government RMS Website as they become available.

The following listed hardware and software is the minimum system configuration but that the Contractor shall have to run QCS:

Hardware

IBM-compatible PC with 200 MHz Pentium or higher processor

32+ MB RAM

4 GB hard drive disk space for sole use by the QCS system

3 1/2 inch high-density floppy drive

Compact disk (CD) Reader

Color monitor

Laser printer compatible with HP LaserJet III or better, with minimum 4 MB installed memory.

Connection to the Internet, minimum 28 BPS

Software

MS Windows NT 4.0 or newer is recommended

Word Processing software compatible with MS Word 97 or newer

Internet browser

The Contractor's computer system shall be protected by virus protection software that is regularly upgraded with all issued manufacturer's updates throughout the life of the contract.

Electronic mail (E-mail) compatible with MS Outlook]

3.7 CONTROL CONSTRUCTION

Contractor Quality Control is the means by which the Contractor ensures that the construction, to include that of subcontractors and suppliers, complies with the requirements of the contract. The CQC System Manager shall conduct at least three phases of control for each definable feature of construction work, as follows:

3.7.1 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 work site. This phase shall include:

- a. Review each paragraph of applicable specifications, reference codes and standards. The Contractor shall make available and maintain a copy, in the field, of the referenced codes and standards applicable to the work to be accomplished, until final acceptance of the work.

- b. A review of the contract drawings.
- 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.
- 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. This phase shall include a meeting conducted by the CQC System Manager 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 CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.7.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

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

- f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.
- g. The initial phase should be repeated for each new crew to work onsite, or any time acceptable specified quality standards are not being met.

3.7.3 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 nor conceal non-conforming work.

3.7.4 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.

3.8 TESTS

3.8.1 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 Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. 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.
- e. Record results of all tests taken, both passing and failing tests, on the CQC report for the date taken. Record the specification paragraph reference, location where tests were taken, and the sequential control number identifying the test. If Approved by

the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. Provide an information copy of tests performed by an offsite or commercial test facility 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.

3.8.2 Testing Laboratories

3.8.2.1 Capability Check

The Government reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.8.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge of \$1,500.00 to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor.

3.8.2.3 Laboratory Approval

The Contractor shall use a testing laboratory that has been previously approved by the Corps of Engineers or obtain approval for a laboratory established at the project site. Approved laboratories are listed at the following web site: <http://www.wes.army.mil/SL/MTC/ValStatesTbl.htm> If the Contractor elects to set up an on-site laboratory at the project site, the Contractor will be assessed \$4500.00 for the cost of inspection of this lab by the Corps of Engineers.

3.8.3 Onsite Laboratory

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

3.8.4 Furnishing or Transportation of Samples for Testing

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 following address:

Field Exploration Unit
or
Soils Laboratory Unit
(indicate which on shipping or mailing forms)
Fort McHenry Yard
Baltimore, Maryland 21230"

Coordination for each specified test, exact delivery location, and dates will be made through the Government's Area/Resident Office.

3.9 COMPLETION INSPECTION

3.9.1 Punch-Out Inspection

Near the completion of all work or any increment thereof established by a completion time stated in the Special Clause in Section 00800 of the Solicitation entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a punchlist of items which do not conform to the approved drawings and 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 CQC System Manager 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 Pre-Final inspection.

3.9.2 Pre-Final Inspection

The Government will perform pre-final inspection to verify that the facility is complete and ready to be occupied. A Government Pre-Final Punch List may be developed as a result of this inspection. The Contractor's CQC System Manager 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 any particular increment of the work if the project is divided into increments by separate completion dates.

3.9.3 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 the final acceptance 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".

3.10 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. The report shall be on an acceptable form, including, as a minimum, the following information:

- a. Contractor/subcontractor and their area of responsibility.
- 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 shall 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 and deliverables reviewed, with contract reference, by whom, and action taken.
- g. Off-site surveillance activities, including actions taken.
- h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.
- i. Instructions given/received and conflicts in plans and/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. 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. Furnish the original and one copy of these records in report form to the Government at the beginning of the next day 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, submit one report for every 7 days of no work and on the last day of a no work period. Account for all calendar days throughout the life of the contract. The first report following a day of no work shall be for that day only. The CQC System Manager shall sign and date all reports. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.11 SAMPLE FORMS

Sample forms enclosed at the end of this section.

3.12 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 work site, 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.

-- End of Section --

Contractor's Name:	_____
Address:	_____ _____
Phone Number:	_____

CONSTRUCTION QUALITY CONTROL REPORT

PROJECT NAME: _____
 LOCATION: _____ DATE: _____
 CONTRACT NUMBER: _____ REPORT NO.: _____

SUPERINTENDENT: _____			
TYPE OF WORKERS	NUMBER	TYPES OF CONSTRUCTION EQUIPMENT ON SITE	NUMBER
SUBCONTRACTORS			
COMPANY	RESPONSIBILITY	FOREMAN	NO. OF WORKERS
TOTALS			
NO. OF WORKERS TODAY	MANHOURS TODAY	MANHOURS FOR THIS PERIOD	
CONTRACT MATERIALS AND EQUIPMENT DELIVERED TO SITE:			
WEATHER: _____ SITE CONDITIONS: _____			
DID A DELAY OR WORK STOPPAGE OCCUR TODAY? _____ IF YES, EXPLAIN.			
HAS ANYTHING DEVELOPED IN THE WORK WHICH MAY LEAD TO A CHANGE OR FINDING OF FACT? _____ IF YES, EXPLAIN.			

DESCRIPTION OF ALL WORK PERFORMED TODAY
(LIST BY DEFINABLE FEATURES OF WORK)

PREPARATORY INSPECTION:

LIST ALL INSPECTIONS BY SUBJECT AND SPECIFICATION LOCATION.
ATTACH MINUTES OF MEETING AND LIST OF ALL ATTENDEES.

HAVE ALL REQUIRED SUBMITTALS AND SAMPLES OF CONSTRUCTION BEEN
APPROVED.

DO THE MATERIALS AND EQUIPMENT TO BE USED CONFORM TO THE SUBMITTALS?

HAS ALL PRELIMINARY WORK BEEN INSPECTED, TESTED, AND COMPLETED?

TEST REQUIRED AND INSPECTION TECHNIQUES TO BE EXECUTED TO PROVE
CONTRACT COMPLIANCE (INCLUDE BOTH EXPECTED AND ACTUAL RESULTS)

HAS A PHASE HAZARD ANALYSIS BEEN PERFORMED?

COMMENTS AND DEFICIENCIES NOTED AND CORRECTIVE ACTIONS TAKEN:

ALL INSTRUCTIONS RECEIVED FROM QA PERSONNEL AND ACTIONS TAKEN:

JOB SAFETY (INCLUDE MEETINGS HELD AND DEFICIENCIES NOTED WITH
CORRECTIVE ACTIONS):

INITIAL INSPECTION:

LIST ALL INSPECTIONS BY SUBJECT AND SPECIFICATION LOCATION.
COMMENTS AND/OR DEFICIENCIES NOTED AND CORRECTIVE ACTION TAKEN:

FOLLOW-UP INSPECTION:

LIST ALL INSPECTIONS BY SUBJECT AND SPECIFICATION LOCATION.
COMMENTS AND/OR DEFICIENCIES NOTED AND CORRECTIVE ACTION TAKEN.

SIGNATURE: _____
QUALITY CONTROL REPRESENTATIVE/MANAGER

THE ABOVE REPORT IS COMPLETE AND CORRECT. ALL MATERIALS AND
EQUIPMENT USED AND ALL WORK PERFORMED DURING THIS REPORTING PERIOD
ARE IN COMPLIANCE WITH THE CONTRACT SPECIFICATIONS, AND SUBMITTALS,
EXCEPT AS NOTED ABOVE.

SIGNATURE: _____
CONTRACTOR'S APPROVED AUTHORIZED REPRESENTATIVE

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-- End of Section Table of Contents --

SECTION 01510

TEMPORARY CONSTRUCTION ITEMS

09/02

PART 1 GENERAL

1.1 General

The work covered by this section consists of furnishing all labor, materials, equipment, and services and performing all work required for or incidental to the items herein specified. No separate payment will be made for the construction and services required by this section, and all costs in connection therewith shall be included in the overall cost of the work unless specifically stated otherwise.

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Temporary Electrical Work; G AR.

The Contractor shall submit a temporary power distribution sketch prior to the installation of any temporary power.

1.3 PROJECT SIGN: (AUG 1974)

A project sign shall be provided and erected at a location designated by the Contracting Officer. The sign shall conform to the requirements as shown on Attachment No. 1, a copy of which is attached hereto. The sign shall be erected as soon as possible and within 15 days after the date of receipt of notice to proceed. Upon completion of the project, the sign shall be removed and disposed of by the Contractor. (CENAB)

1.4 SAFETY SIGN (AUG 1974)

A safety sign shall be provided and erected at a location designated by the Contracting Officer. The sign shall conform to the requirements as shown on Attachment No. 2, a copy of which is attached hereto. The sign shall be erected as soon as possible and within 15 days after the date of receipt of notice to proceed. The data required by the sign shall be corrected daily, with light colored metallic or non-metallic numerals. Numerals, including mounting hardware, shall be subject to the approval of the Contracting Officer. Upon completion of the project, the sign shall be removed and disposed of by the Contractor. (CENAB)

1.5 TEMPORARY ELECTRICAL WORK: (APR 1962 REV JUL 2000)

Temporary electrical work shall be in accordance with Sections 7 and 11 of

EM 385-1-1 U.S. Army Corps of Engineers Safety and Health Requirements Manual. The Contractor shall submit for approval a temporary power distribution sketch prior to the installation of any temporary power. The sketch shall include location, voltages, and means of protection for all temporary distribution system wiring and components to include lighting, receptacles, grounding, disconnecting means, and GFCIs. The Contractor shall test the temporary power system and devices for polarity, ground continuity, and ground resistance prior to the initial use and before use after any modification. The Contractor shall verify to the satisfaction of the Contracting Officer or his representative by a calibrated light meter that the minimum illumination required by Table 7-1 of the EM 385-1-1 is being provided. (CENAB-EN-DT)

1.6 GOVERNMENT FIELD OFFICE

1.6.1 Resident Engineer's Office

The Contractor shall provide the Government Resident Engineer with an office, approximately 200 square feet in floor area, located where directed, and providing space heat, electric light and power, toilet facilities consisting of one lavatory and one water closet complete with connections to water and sewer mains. A mail slot shall be provided in the door, or an apartment-type lockable mail box mounted on the surface of the door. At completion of the project, the office shall remain the property of the Contractor and shall be removed from the site. All utility connections shall be connected and disconnected in accordance with local codes and to the satisfaction of the Contracting Officer. If a window style air conditioner is used then the refrigerant shall be one of the fluorocarbon gases that is in accordance with FS A-A-58060 and has an Ozone Depletion Potential (ODP) of less than or equal to 0.05.

1.6.2 Trailer-Type Mobile Office (Contractor's Option)

In lieu of constructing, maintaining and, at end of construction period, removing a temporary type field office, the Contractor may, at his option, furnish and maintain a trailer-type mobile office acceptable to the Contracting Officer and providing as a minimum the facilities specified above. The trailer shall be securely anchored to the ground at all four corners to guard against movement during high winds.

1.7 TEMPORARY PAVING PATCH

The Contractor shall place a temporary patch of cold mixed asphalt of adequate size and thickness immediately after utility trenches or other road or paved area openings are backfilled and compacted as specified in DIVISION II. The temporary patch shall be maintained by the Contractor until he permanently repairs the opening as delineated in DIVISION II. (SUGG NO. 75-183)

1.8 BULLETIN BOARD: (NOV 1983)

Immediately upon beginning of work under this contract, the Contractor shall provide a weatherproof glass-covered bulletin board not less than 36 x 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 site of work 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 under the contract is complete. Upon completion of work under this contract the bulletin board shall be removed by and remain the property of the Contractor. (AFRCE)

1.9 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 hazardous areas during both day and night. (CENAB)

1.10 Staging Area

a. The Contractor will be assigned, by the Contracting Officer, construction staging, lay-down and temporary office areas.

b. Upon completion of all work outlined in the contract drawings and specifications, the Contractor shall remove from the confines of the base, all his/her construction materials and his/her equipment.

c. The Contractor shall restore the construction staging, lay-down and temporary office areas to their original condition.

1.11 Marking of Equipment, Trailers, and Temporary Offices

The Contractor shall ensure that equipment, temporary offices, and trailers used on the job are conspicuously marked with both name and telephone number of owner. The use and placement of equipment, temporary offices, and trailers at the immediate job site will not be allowed unless the Contracting Officer grants permission.

a. Construction Site Marking. On commencement of work, the contractor shall furnish and erect a temporary sign in a location selected by the CCI near the project site. A drawing of sign standard shall be provided by the CCI. The Contractor will maintain the sign in good condition throughout the project construction period, and upon completion of the project shall remove the above sign from the premises. This sign shall be at least 4' - 0" wide by 4' - 0" high but not larger than 4' - 0" wide by 8' - 0" high, of .080" thick aluminum with bronze tone factory finish. Lettering shall be white (adhesive or painted) reflective lettering with dimensions as shown on the drawing. The sign shall be bordered by 3/8" white reflective border. The sign shall be mounted on 8' long 4" x 4" posts embedded 2' - 0" into the ground. These posts shall be No. 2 grade or better and shall be painted a bronze tone finish. The backside of the sign is to be sheathed in 1/8" plastic with all required contract documents removable for re-pasting literature, but sufficiently sealed to provide weatherproofing.

1.12 SANITARY FACILITIES

Provide proper sanitary and adequate toilet facilities for the use of all workers employed on the Project, located where directed, and enforce their use by all personnel on the Project. Enclose and weatherproof toilets and

keep in a sanitary condition at all times. The Contractor shall be responsible to maintain the facility in sanitary condition.

1.13 STORAGE AREA AND FENCES

1. The Contractor may request approval for an open-air, unsecured storage area on Base for storage of materials and equipment, providing such a space is available at that time. The size and location of the area shall be as directed by the Contracting Officer.

2. The Contractor shall provide his/her own security for the area. The storage area shall be kept in a safe, neat, and orderly manner at all times.

3. Any security fence used for the storage area shall be erected and maintained by the Contractor at his/her own expense. Upon completion of the contract, the security fence shall be removed from the Base by the Contractor, prior to final payment.

1.14 REMOVAL

1. Remove temporary materials, equipment, services, and construction prior to final inspection.

2. Clean and repair damage caused by installation or use of temporary facilities and restore existing facilities used during construction to original or specified condition.

1.15 MEASUREMENT AND PAYMENT

No separate measurement and payment will be made for the work performed in this Section 01510, TEMPORARY CONSTRUCTION ITEMS, specified herein, and all costs in connection therewith shall be considered a subsidiary obligation of the Contractor, and shall be included in the overall cost of the work.

PART 2 PRODUCT
NOT APPLICABLE

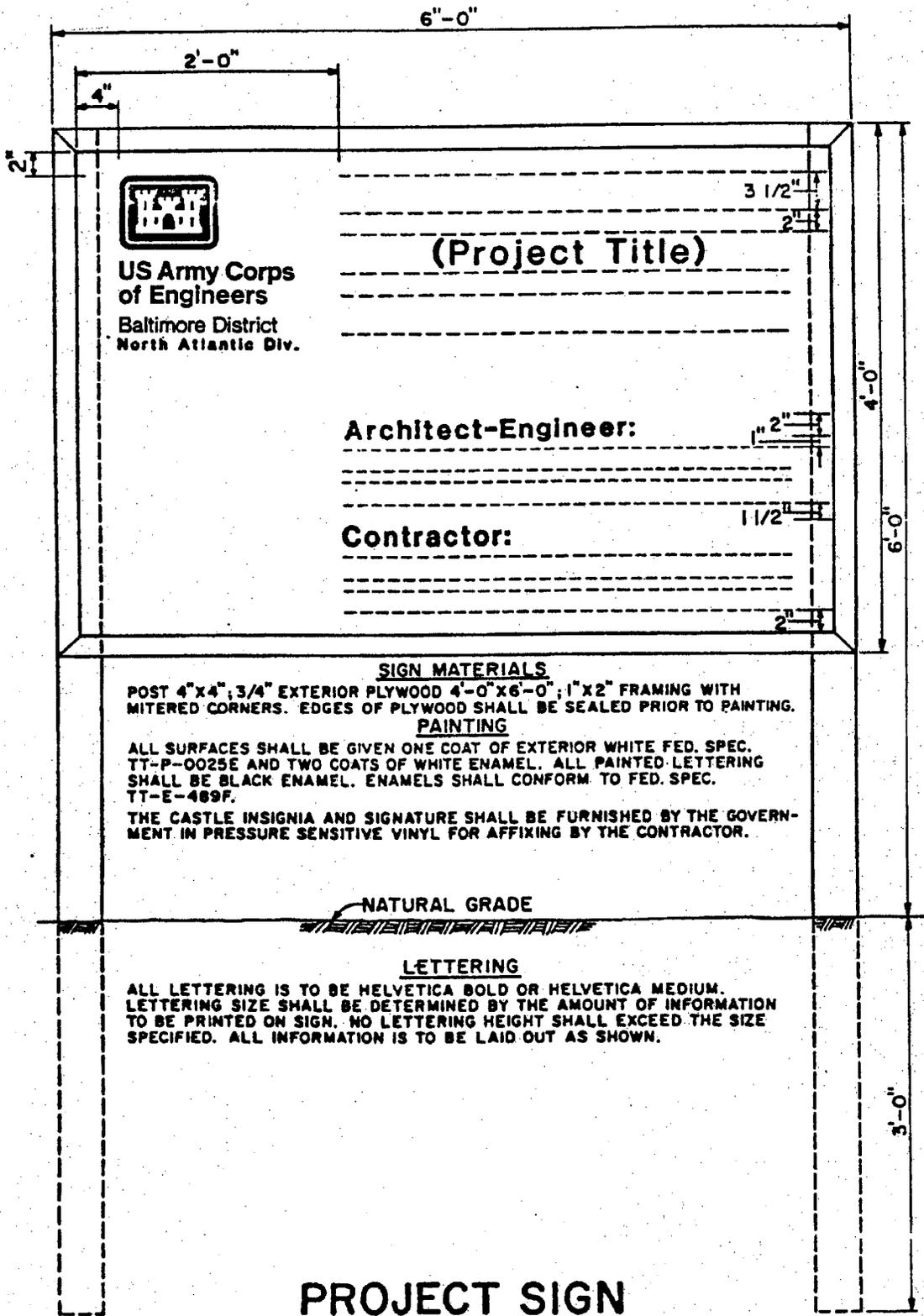
PART 3 EXECUTION
NOT APPLICABLE

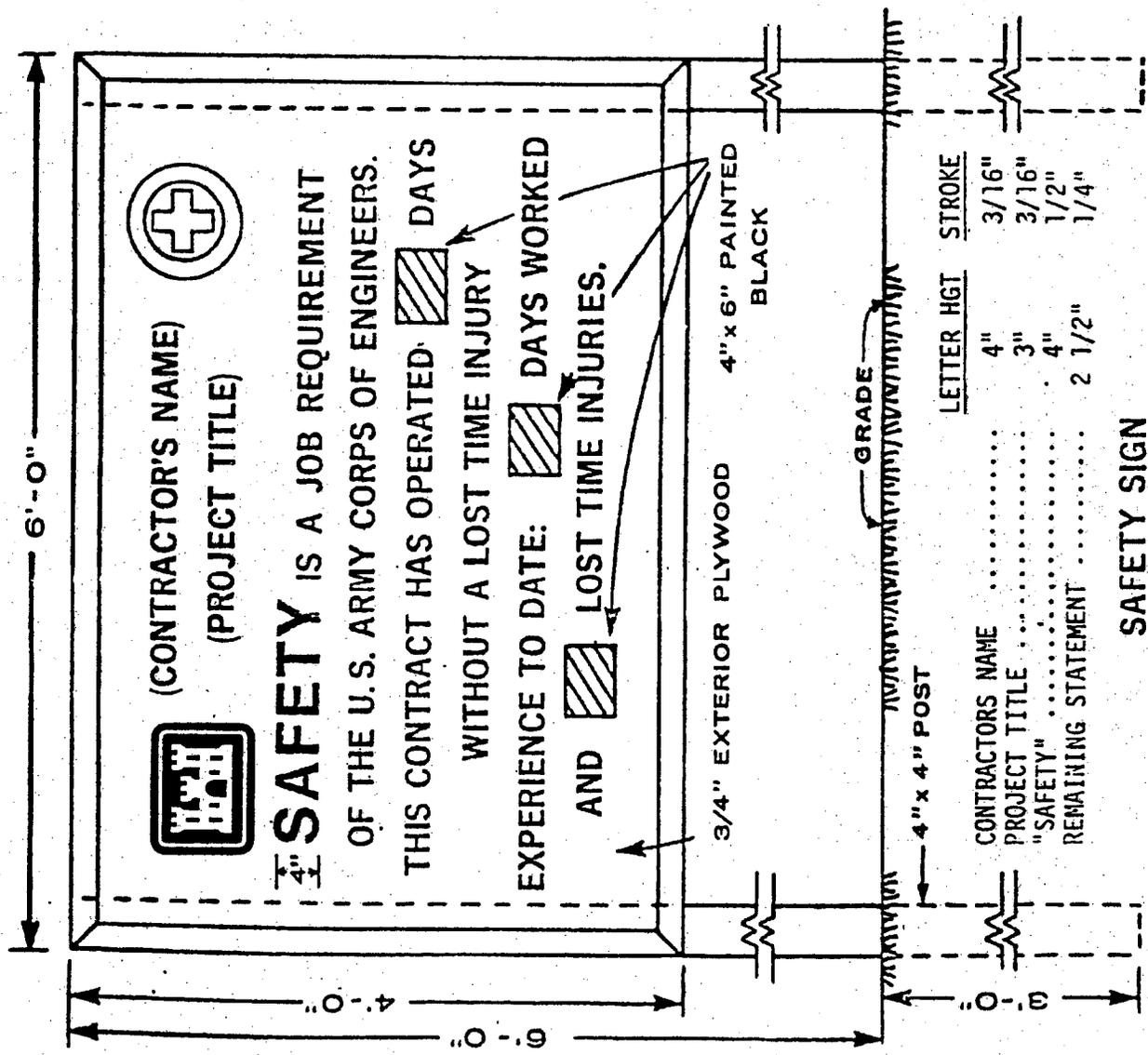
ATTACHMENTS:

Attachment 1 Project Sign

Attachment 2 Safety Sign

-- End of Section --





SIGN MATERIALS

POST 4"x4"; 3/4" EXTERIOR PLYWOOD 4'-0"x6'-0", 2"x2" FRAMING WITH MITERED CORNERS. FRAMING BE ENCLOSED EDGES OF PLYWOOD AND BE INSTALLED FLUSH ON BACK SIDE AND PROJECTING IN FRONT. OUTSIDE WHITE, HOUSE PAINT-2 COATS; BOTH SIDES AND EDGES; COLORS IN OIL FOR LETTERING - LAMP BLACK AND BULLETIN RED; CASTLE SHALL BE RED; LETTERING SHALL BE BLACK; THE CROSS SHALL BE GREEN

THE CASTLE INSIGNIA SHALL BE FURNISHED BY THE GOVERNMENT IN PRESSURE SENSITIVE VINYL FOR AFFIXING BY THE CONTRACTOR.

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SECTION 01561

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01/01

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- 1.4 SUBCONTRACTORS
- 1.5 PROTECTION OF WATER RESOURCES
- 1.6 EROSION AND SEDIMENTATION CONTROL
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PART 2 PRODUCT

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01561

ENVIRONMENTAL PROTECTION

01/01

PART 1 GENERAL

The work covered by this section consists of furnishing all labor, materials and equipment and performing all work required for the prevention of environmental pollution during, and as the result of, construction operations under this contract except for those measures set forth in the Technical Provisions of these specifications. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life or affect other species of importance to man. The control of environmental pollution requires consideration of air, water, and land.

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-05 Preconstruction Submittals

Facility Plan; G AR.

Location of storage and service facilities.

Temporary Plan; G AR.

Temporary excavation and embankments.

1.2 APPLICABLE REGULATIONS

The Contractor and his subcontractors in the performance of this contract, shall comply with all applicable Federal, State, and local laws and regulations concerning environmental pollution control and abatement in effect on the date of this solicitation, as well as the specific requirements stated elsewhere in the contract specifications.

1.3 NOTIFICATION

The Contracting Officer will notify the Contractor of any non-compliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately take corrective action. 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 time lost due to any such stop order shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor unless it is later

determined that the Contractor was in compliance.

1.4 SUBCONTRACTORS

Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.5 PROTECTION OF WATER RESOURCES

The Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acid construction wastes or other harmful materials. All work under this contract shall be performed in such a manner that objectionable conditions will not be created in streams through or adjacent to the project areas.

1.6 EROSION AND SEDIMENTATION CONTROL

The Contractor shall accomplish the erosion and sedimentation control in accordance with the contract drawings. At the outset of construction, the Contractor will be required to accept by signature a Transfer of Authority letter. The acceptance of the Transfer of Authority places responsibility on the Contractor to fully adhere to the provisions of the General Permit for erosion and sedimentation control and stormwater management.

1.7 BURNING

Burning will be allowed only if permitted in other sections of the specifications or authorized in writing by the Contracting Officer. The specific time, location and manner of burning shall be subject to the approval of the Contracting Officer. Fires shall be confined to a closed vessel, guarded at all times and shall be under constant surveillance until they have burned out or have been extinguished. All burning shall be so thorough that the materials will be reduced to ashes.

1.8 DUST CONTROL

The Contractor shall maintain all work area free from dust which would contribute to air pollution. Approved temporary methods of stabilization consisting of sprinkling, chemical treatment, light bituminous treatment or similar methods will be permitted to control dust. Sprinkling, where used, must be repeated at such intervals as to keep all parts of the disturbed area at least damp at all times. Dust control shall be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

1.9 PROTECTION OF LAND RESOURCES

1.9.1 General

It is intended that the land resources within the project boundaries and outside the limits of permanent work performed under this contract be preserved in their present condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the project. Insofar as possible, the Contractor shall confine his construction activities to areas defined by the plans and specifications or to be cleared for other operations. The following additional requirements are intended to supplement and clarify the requirements of the CONTRACT CLAUSES:

1.9.2 Protection of trees retained

1.9.2.1 Contractors Responsibility

The Contractor shall be responsible for the protection of the tops, trunks and roots of all existing trees that are to be retained on the site. Protection shall be maintained until all work in the vicinity has been completed and shall not be removed without the consent of the Contracting Officer. If the Contracting Officer finds that the protective devices are insufficient, additional protection devices shall be installed.

1.9.2.2 Stockpiling

Heavy equipment, vehicular traffic, or stockpiling of any materials shall not be permitted within the drip line of trees to be retained.

1.9.2.3 Storage

No toxic materials shall be stored within 100 feet (30.5 m) from the drip line of trees to be retained.

1.9.2.4 Confined Area

Except for areas shown on the plans to be cleared, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without special authority. Existing near by trees shall not be used for anchorage unless specifically authorized by the Contracting Officer. Where such special emergency use is permitted, the Contractor shall first adequately protect the trunk with a sufficient thickness of burlap over which softwood cleats shall be tied.

1.9.2.5 Tree Defacing

No protective devices, signs, utility boxes or other objects shall be nailed to trees to be retained on the site.

1.9.3 Restoration of landscape damage

Any trees or other landscape feature scarred or damaged by the Contractor's operations shall be restored as nearly as possible to its original condition at the Contractor's expense. The Contracting Officer will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of. All scars made on trees, designated on the plans to remain, and all cuts for the removal of limbs larger than 1-inch in diameter shall be coated as soon as possible with an approved tree wound dressing. All trimming or pruning shall be performed in an approved manner by experienced workmen with saws or pruning shears. Tree trimming with axes will not be permitted. Where tree climbing is necessary, the use of climbing spurs will not be permitted. Trees that are to remain, either within or outside established clearing limits, that are subsequently damaged by the Contractor and are beyond saving in the opinion of the Contracting Officer, shall be immediately removed and replaced with a nursery-grown tree of the same species. Replacement trees shall measure no less than 2 inches in diameter at 6 inches above the ground level.

1.9.4 Location of Storage and Services Facilities

The location on Government property of the Contractor's storage and service facilities, required temporarily in the performance of the work, shall be upon cleared portions of the job site or areas to be cleared. The preservation of the landscape shall be an imperative consideration in the selection of all sites and in the construction of buildings. A facility plan showing storage and service facilities shall be submitted for approval to the Contracting Officer. Where buildings or platforms are constructed on slopes, the Contracting Officer may require cribbing to be used to obtain level foundations. Benching or leveling of earth may not be allowed, depending on the location of the proposed facility.

1.9.5 Temporary Excavation and Embankment

If the Contractor proposes to construct temporary roads, embankments or excavations for plant and/or work areas, he shall submit a temporary plan for approval prior to scheduled start of such temporary work.

1.10 MEASUREMENT AND PAYMENT

Except as noted in paragraph, PERFORMANCE AND PAYMENT BOND REIMBURSEMENT above, no separate measurement and payment will be made for the work performed in this Section 01561, ENVIRONMENTAL PROTECTION specified herein and all costs in connection therewith shall be considered a subsidiary obligation of the Contractor, and shall be included in the overall cost of the work.

PART 2 PRODUCT
NOT APPLICABLE

PART 3 EXECUTION
NOT APPLICABLE

-- End of Section --

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SECTION 01720

AS-BUILT DRAWINGS - CADD

01/01

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PART 2 PRODUCT

PART 3 EXECUTION

-- End of Section Table of Contents --

SECTION 01720

AS-BUILT DRAWINGS - CADD
01/01

PART 1 GENERAL

1.1 PURPOSE

As-builts covered under this section apply to revisions to the Contractor's approved drawings resulting from construction changes.

1.2 PREPARATION

This section covers the preparation of as-built drawings complete, as a requirement of this contract. The terms "drawings," "contract drawings," "drawing files," and "final as-built drawings" refer to a set of computer-aided design and drafting (CADD) contract drawings in electronic file format which are to be used for as-built drawings.

1.3 PROGRESS MARKED UP AS-BUILT PRINTS

The Contractor shall revise one set of paper prints to show the as-built conditions during the prosecution of the project. These as-built marked prints shall be kept current and available on the jobsite at all times. All changes from the contract plans which are made in the work or additional information which might be uncovered in the course of construction shall be accurately and neatly recorded as they occur by means of details and notes. The as-built marked prints will be jointly reviewed for accuracy and completeness by the Contracting Officer and a responsible representative of the construction Contractor prior to submission of each monthly pay estimate. If the Contractor fails to maintain the as-built drawings as specified herein, the Contracting Officer will deduct from the monthly progress payment an amount representing the estimated cost of maintaining the as-built drawings and will continue the monthly deduction of the 10% retainage even after 50% completion of the contract. This monthly deduction will continue until an agreement can be reached between the Contracting Officer and a representative of the Contractor regarding the accuracy and completeness of updated drawings. The prints shall show the following information, but not be limited thereto:

1.3.1 Location and Description

The location and description of any utility lines or other installations of any kind or description known to exist within the construction area. The location includes dimensions to permanent features.

1.3.2 Location and Dimensions

The location and dimensions of any changes within the building or structure.

1.3.3 Corrections

Correct grade, cross section, or alignment of roads, earthwork, structures or utilities if any changes were made from contract plans.

Correct elevations if changes were made in site grading.

1.3.4 Changes

Changes in details of design or additional information obtained from working drawings specified to be prepared and/or furnished by the Contractor; including but not limited to fabrication, erection, installation plans and placing details, pipe sizes, insulation material, dimensions of equipment foundations, etc.

The topography, invert elevations and grades of all drainage installed or affected as a part of the project construction.

All changes or modifications which result from the final inspection.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES FOR DESIGN-BUILD:

SD-11 Closeout Submittals

Progress Prints; G AR.

Preparation of two copies of as-builts from the Contractor to the Contracting Officer for review and approval.

Final Requirements; G AR.

CADD Files.

Shall consist of two sets of completed as-built contract drawings on separate media consisting of both CADD files (compatible with the Using Agency/Sponsor's system on electronic storage media identical to that supplied by the Government) and a CALS Type 1, Group 4, Raster Image File of each contract drawing.

Receipt by the Contractor of the approved marked as-built prints.

1.5 PRELIMINARY SUBMITTAL

At the time of final inspection, the Contractor shall prepare two copies of the progress as-built prints and these shall be delivered to the Contracting Officer for review and approval. The final inspection shall be performed with the as-built prints in hand. These as-built marked prints shall be neat, legible and accurate. The review by Government personnel will be expedited to the maximum extent possible. Upon approval, one copy of the as-built marked prints will be returned to the Contractor for use in preparation of final as-built drawings. If upon review, the as-built marked prints are found to contain errors and/or omissions, they shall be returned to the Contractor for corrections. The Contractor shall complete the corrections and return the as-built marked prints to the Contracting Officer within ten (10) calendar days.

1.6 DRAWING PREPARATION

1.6.1 As-Built Drawings Approval

The Contractor shall use an electronic set of drawings with all amendments incorporated to be used for as-built drawings. Upon approval of the as-built prints submitted, these drawings shall be modified as may be necessary to correctly show all the features of the project as it has been constructed by bringing the contract set into agreement with the approved as-built prints, adding such additional drawings as may be necessary. These drawings are part of the permanent records of this project and the Contractor shall be responsible for the protection and safety thereof until returned to the Contracting Officer. Any drawings damaged or lost by the Contractor shall be satisfactorily replaced by the Contractor at no expense to the Government.

1.6.2 Proficient Personnel

Only personnel proficient in the preparation of engineering CADD drawings to standards satisfactory and acceptable to the Government shall be employed to modify the contract drawings or prepare additional new drawings. All additions and corrections to the contract drawings shall be equal in quality to that of the originals. Line work, line weights, lettering, layering conventions, and symbols shall be the same as the original line work, line weights, lettering, layering conventions, and symbols. If additional drawings are required, they shall be prepared using the specified electronic file format applying the same guidance specified for original drawings. The title block and drawing border to be used for any new as-built drawings shall be identical to that used on the contract drawings. All additions and corrections to the drawings shall be accomplished by the software used to prepare the final approved drawings. The Contractor is responsible for providing all program files and hardware necessary to prepare as-built drawings. The Contracting Officer will review all as-built drawings for accuracy and the Contractor shall make all required corrections, changes, additions, and deletions.

1.6.3 Final Revisions

When final revisions have been completed, the cover sheet drawing shall show the wording "RECORD DRAWING AS-BUILT" followed by the name of the General Contractor in letters at least 3/16 inch high. All other contract drawings shall be marked either "As-Built" drawing denoting no revisions on the sheet or "Revised As-Built" denoting one or more revisions. All original contract drawings shall be dated in the revision block (SEE ATTACHMENT 1) located at the end of this section.

1.7 FINAL REQUIREMENTS

After receipt by the Contractor of the approved marked as-built prints the Contractor will, within 30 days make the final as-built submittal. The submittal shall consist of the following:

a) Two sets of the as-built contract drawings on separate CD's (ISO 9660 Format CD-ROM) consisting of the updated CADD files and a CALS Type 1 Group 4 Raster Image File of each contract drawing plate. The CALS files shall be exact duplicates of the full sized plots of the completed as-built contract drawings at a resolution of 400 dpi and may be either plotted to CALS files directly from the CADD files, or scanned to file from the prints.

b) Two sets of full size paper prints (plots) of the completed as-built contract drawings.

c) The return of the approved marked as-built prints.

They shall be complete in all details and identical in form and function to the Contractor's contract drawing files. All paper prints, drawing files and storage media submitted will become the property of the Government upon final approval. Failure to submit as-built drawing files and marked prints as required herein shall be cause for withholding any payment due the Contractor under this contract. Approval and acceptance of final as-built drawings shall be accomplished before final payment is made to the Contractor.

PART 2 PRODUCT
NOT APPLICABLE

PART 3 EXECUTION
NOT APPLICABLE

-- End of Section --

**RECORD DRAWING AS-BUILT
XYZ CONTRACTOR**

Plate: 1

Sheet Number: T-1

FT. INDIANTOWN GAP PENNSYLVANIA

EQUIPMENT CONCENTRATION SITE

COVER SHEET

U.S. ARMY ENGINEER DISTRICT, BALTIMORE CORPS OF ENGINEERS BALTIMORE, MARYLAND	Designed by:		Date: JAN 2001	Rev.
	Dwn by:	Ckd by:	Design file no.	
A/E FIRM/CONTRACTOR 3 LINES PROVIDED OR LOGO	Reviewed by:		Drawing Number: F-XXX-XX-XX	
	Submitted by: Chief, Branch		File name: FILENAME Plot date: 12/25/00 Plot scale: 1=1	

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.
	AS-BUILT	10 SEP 02					
3	REVISED SECTION A-A AND C-C	5 JAN 01	A.E. D.P.				
2	REVISED PER AMENDMENT NO. 2	30 DEC 00	A.E. D.P.				
1	REVISED PER AMENDMENT NO. 1	25 DEC 00	A.E. D.P.				