

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE <b>J</b>	PAGE OF PAGES <b>1   3</b>
2. AMENDMENT/MODIFICATION NO. <b>U0002</b>	3. EFFECTIVE DATE <b>29-Mar-2004</b>	4. REQUISITION/PURCHASE REQ. NO. <b>W32CS532181946</b>		5. PROJECT NO. (If applicable)	
6. ISSUED BY CODE <b>W912EP</b>  USA ENGINEER DISTRICT, JACKSONVILLE PRUDENTIAL OFFICE BLDG 701 SAN MARCO BLVD ATTN: CESAJ-CT JACKSONVILLE FL 32207-8175		7. ADMINISTERED BY (If other than item 6) CODE  <b>See Item 6</b>			
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)				<input checked="" type="checkbox"/>	9A. AMENDMENT OF SOLICITATION NO. <b>W912EP-04-B-0004</b>
				<input checked="" type="checkbox"/>	9B. DATED (SEE ITEM 11) <b>10-Mar-2004</b>
					10A. MOD. OF CONTRACT/ORDER NO.
					10B. DATED (SEE ITEM 13)
CODE		FACILITY CODE			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>					
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended. <p>Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods:  (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted;  or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.</p>					
12. ACCOUNTING AND APPROPRIATION DATA (If required)					
<b>13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>					
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).					
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
D. OTHER (Specify type of modification and authority)					
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.					
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) <b>Shore Protection Project, Ft. Pierce, Florida Beach Renourishment 2004, Hutchinson Island.</b>  The date for receipt of bid opening remains 09 APRIL 2004 @ 2:00 p.m.  SEE CONTINUATION PAGE					
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.					
15A. NAME AND TITLE OF SIGNER (Type or print)			16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)		
			TEL: _____ EMAIL: _____		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)		15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)		16C. DATE SIGNED

SF 30 CONTINUATION SHEET

Shore Protection Project, Ft. Pierce, Florida, Beach Renourishment  
2004, Hutchinson Island

**DESCRIPTIVE CHANGES TO SPECIFICATIONS:** The following are descriptive changes to the specifications. Specifications should be adequately marked to indicate that they have been changed.

1. Some specification revisions include additions with underlined text or deletions with line/cross-outs.

2. The text changes may have necessitated reformatting of subsequent text or pages. If this is the case, those pages have also been issued as amended pages but are not marked with asterisks, underlining or line/cross-outs.

SECTION 01110:

- a. **Remove** the old Section 01110 and **insert** the new Section 01110.

SECTION 01270:

- a. On page 3, paragraph 1.2.1.2.b, line 7, **change** "3" calendar days to "7" calendar days.

SECTION 01355:

- a. **Remove** the old Section 01355 and **insert** the new Section 01355.

SECTION 01411:

- a. **Remove** the old Section 01411 and **insert** the new Section 01411.

SECTION 01452:

- a. On page 10, paragraph 3.7, line 5, **insert** "the" between "perform" and "following".
- b. On page 11, paragraph 3.9, line 3, **insert** "that" between "tests" and "have".

SECTION 01525:

- a. On page 12, paragraph 1.20.4, **add** the following to the end of the paragraph: "Provide employee hours worked for current month no later than the 3rd work-day of the following month."

SECTION 02290:

- a. On page 3, paragraph titled "Daily Instrument Logs", line 1, **change** "week" to "weeks".

SECTION 02391:

- a. On page 17, paragraph 3.7.1, lines 1 and 2, **delete** "and shown on the contract drawings".

**DESCRIPTIVE CHANGES TO THE DRAWINGS:** The following are descriptive changes to the drawings. Drawings should be adequately marked to indicate that they have been changed.

DRAWING 1/1:

- a. In zone 4E (Drawing Index), **delete** "2/3 - PLAN" and "2/4 - PLAN".

DRAWING 2/1:

- a. **Remove** drawing 2/1 and **replace** it with the new drawing 2/1.

DRAWING 2/3:

- a. **Remove** drawing 2/3 and do not replace it.

DRAWING 2/4:

- a. **Remove** drawing 2/4 and do not replace it.

DRAWING 3/2:

- a. **Remove** drawing 3/2 and do not replace it.

DRAWING 3/3:

- a. **Remove** drawing 3/3 and do not replace it.

Drawing 4/4:

- a. **Remove** drawing 4/4 and **replace** it with the new drawing 4/4.

Drawing 4/5:

- a. **Remove** drawing 4/5 and **replace** it with the new drawing 4/5.

--End of Changes--

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SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 REFERENCES

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

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

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1.2.1 Project Description

The Ft. Pierce project includes the placement of approximately 225,000 cubic yards on 3,300 feet of beach just south of Ft. Pierce Inlet. The work will include placement of approximately 225,000 cubic yards from R 34 to R 38. The berm width varies along the project at Elevation 10.6 mlw and the construction slope of the fill is 1 vertical on 10 horizontal. A dune will also be included on the beach profile with a crest elevation of 12.7 mlw. A hopper dredge or barge with pump-out capabilities shall be used for transport of the excavated material. The material for the Ft. Pierce segment will come from an offshore borrow area 3.5 miles southeast of the project site which has been used on previous projects.

1.2.2 Location

The project site is located in Ft. Pierce (St. Lucie County) on the east coast of Florida. See Drawing 1/1 for the exact location.

1.2.3 Safety Requirements

See Section 01525 GENERAL SAFETY REQUIREMENTS and COE EM 385-1-1.

1.2.4 ~~Work Performed by~~ Access to Others

See paragraph PROJECT COORDINATION of Section 01310 ADMINISTRATIVE PROCEDURES.

1.3 COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK

a. Read this paragraph in conjunction with the Clause COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.211-10) of Section 00700

CONTRACT CLAUSES.

b. In addition to the above, the following shall apply: The words "commence work" means "commence dredging."

NOTE 1: All work shall be completed by 30 May 2004. No work shall take place on the beach during the period of May 31st through October 31st. No construction activity or equipment shall be allowed on the beach during these periods. No pipes shall be stored on the beach during that portion of the marine turtle nesting season from March 1st through October 31st. Construction vibration monitoring may take place at any time after receipt of Notice to Proceed.

c. Work is defined as any action other than monitoring such as staging or laying of pipelines that could be detrimental to sea turtle nesting or hatching. Turtle monitoring and nest location/relocation activities are required from November 1st through November 30th and from March 1st through May 30th, or until completion of the work on the beach, whichever is earlier. The Contractor's attention is directed to SECTION 01355: ENVIRONMENTAL PROTECTION.

d. In addition to the above, the Contractor shall begin monitoring on the date Notice to Proceed is issued and continue through 30 May 2004 or until completion of the project as required above. If the Contractor is working in the project beach area after 1 March 2004, the Contractor shall relieve the County or their representative from sea turtle monitoring duties in the project area at that time and continue them until completion of the project. From 1 December through 28 February, no sea turtle monitoring is required. Any delay by the Contractor in beginning sea turtle monitoring will not be considered sufficient justification for an extension of the contract period.

1.4 LIQUIDATED DAMAGES - CONSTRUCTION

Refer to the Clause LIQUIDATED DAMAGES - CONSTRUCTION (FAR 52.211-12 of Section 00700 CONTRACT CLAUSES.

1.5 PHYSICAL DATA

Read this paragraph in conjunction with the Clause PHYSICAL DATA (FAR 52.236-4) of Section 00700 CONTRACT CLAUSES.

1.5.1 Physical Conditions

The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and/or by core borings. When the indicated physical conditions are the result of site investigations by core borings, the core boring logs and laboratory data are in Section 00320 GEOTECHNICAL DATA and the core boring locations are shown on the drawings. Also, see Section 00320 GEOTECHNICAL DATA for instructions concerning availability of core borings for inspection.

1.5.2 Weather, Water Stage and Tide Data

See Section 00335 WEATHER, WATER STAGE AND TIDE DATA.

1.5.3 Contractor Investigation

In addition to the information given in the contract drawings, the Contractor shall make his own investigation of available roads for transportation, load limits for bridges and roads, and other road conditions affecting the transportation of materials and equipment to the site. The Contractor shall investigate the availability of railroad sidings, and shall make all arrangements for use of any sidings for the delivery of any materials and equipment to be used on the work.

1.5.4 Maritime Traffic

Marine Traffic in the project area consists of Naval, cruise ships, commercial, pleasure, and small recreational vessels of all types and sizes which can be accommodated by existing depths.

1.6 LAYOUT OF WORK

Read this paragraph in conjunction with the Clause LAYOUT OF WORK (FAR 52.236-17) of Section 00700 CONTRACT CLAUSES.

1.6.1 Established Monuments

The Government has established monuments, control data and elevations for the work site(s) as indicated on the contract drawings. Control monument descriptions are in Section 00330 CONTROL MONUMENT DESCRIPTIONS.

1.6.2 Layout

From the monuments, control data and elevations established by the Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

1.6.3 Survey

The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the monuments, control data and elevations established by the Government. 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, and 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, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and

limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.7 DAMAGE TO WORK

The responsibility for damage to any part of the permanent work shall be as set forth in Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES. However, if, in the judgement of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane, or tornado, 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 Clause CHANGES of Section 00700 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.

1.8 EXISTING WORK

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

- a. Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work shall be in a condition equal to or better than that which existed before new work started.

1.9 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989)

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the Clause DEFAULT (FIXED-PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES. 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.

#### 1.9.1 Schedule of Monthly Anticipated Adverse Weather Days

See Section 00335 WEATHER, WATER STAGE AND TIDE DATA.

#### 1.9.2 Contractor Responsibility

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 (b) 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 Clause DEFAULT (FIXED PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES.~~ If the number of actual adverse weather delay days exceeds the number of days anticipated in Section 00335 WEATHER, WATER STAGE AND TIDE DATA, 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 Clause DEFAULT (FIXED PRICE CONSTRUCTION) of Section 00700 CONTRACT CLAUSES.

#### 1.10 UNITS OF MEASURE

The standard U.S. system or the metric systems of measure may be utilized by the Contractor in the performance of his work. All survey records, official documentation, engineering data, and all correspondence, including any submittals and shop drawings, shall clearly denote which system of measure is being utilized, referenced or discussed. Any omission, unprofessional or inaccurate use of a unit of measure on the part of the Contractor shall not relieve him of his responsibilities under the contract terms. The unit of measure used in this specification is the standard U.S. system. The contract drawings denote both standard U.S. system and metric system where appropriate. If no unit of measure is indicated on the drawing such as on ranges, stations, slope elevations, and distance numbers, then they are to be considered the standard U.S. system.

#### 1.11 CONSTRUCTION FORMS AND DETAILS

From the Jacksonville District Home Page, click the links ORGANIZATIONS, ENGINEERING, then CONSTRUCTION FORMS AND DETAILS. See web site address [www.saj.usace.army.mil/cadd/end/construction\\_forms\\_and\\_details.htm](http://www.saj.usace.army.mil/cadd/end/construction_forms_and_details.htm).

Shore Protection Project, Ft. Pierce, Florida,  
Beach Renourishment 2004, Hutchinson Island

W912EP-04-B-0004

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION (NOT APPLICABLE)

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SECTION 01355

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 SCOPE

This Section covers prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other Technical Requirements of these specifications. For the purpose of this specification, environmental damage is defined as the presence of hazardous, physical, chemical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; affect other species, biological communities, or ecosystems; or degrade the quality of the environment for aesthetic, cultural, and/or historical purposes. The control of environmental damage requires consideration of land, water, and air, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 REFERENCES

1.2.1 Miscellaneous Environmental Laws And Regulations

There are numerous environmental laws and regulations. At the Federal level, the applicable laws and regulations include compliance with the Clean Water Act (CWA); Clean Air Act (CAA); Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Marine Protection, Research, and Sanctuaries Act (MPRSA); Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA); National Environmental Policy Act (NEPA); National Historic Preservation Act (NHPA); National Pollution Discharge Elimination System (NPDES); Research and Sanctuaries Act; Native American Graves Protection and Repatriation Act (NAGPRA); Resource Conservation and Recovery Act (RCRA); Rivers and Harbors Act (R&H); Safe Drinking Water Act (SDWA); Toxic Substance Control Act (TSCA); Wild and Scenic Rivers Act (WSRA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Code of Federal Regulations (CFRs); Executive Orders; and, Environmental Protection Agency (EPA) requirements. NEPA compliance measures specified in an Environmental Assessment (EA) or Environmental Impact Statements (EIS) are also applicable with regard to compliance.

1.2.2 Publication Reference(s)

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

U.S. ARMY CORPS OF ENGINEERS (USACE)

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

COE EM 1110-1-1003 (1996) NAVSTAR Global Positioning System  
Surveying

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for environmental protection of all items set forth herein. The Contractor shall record on daily quality control reports or attachments thereto, any problems in complying with laws, regulations and ordinances, and corrective action taken.

1.4 PERMITS AND AUTHORIZATIONS

The Contractor shall obtain all needed permits or licenses. The Government will not obtain any permits for this project; see Clause PERMITS AND RESPONSIBILITIES of Section 00700 CONTRACT CLAUSES. The Contractor shall be responsible for implementing the terms and requirements of the appropriate permits as needed and for payment of all fees.

In addition to the above, the Contractor shall comply with all requirements under the terms and conditions set out in the following permit(s) and authorization(s) obtained by the Corps of Engineers listed below. These permit(s) and authorization(s) are available for review by contacting the Jacksonville District, Operations and Technical Support Section at 904-232-2539.

a. Florida Department of Environmental Protection Permit No.  
0126215-002-JC; Effective Date: 3/19/2003; Expiration Date: 3/19/2008.

b. Florida Department of Environmental Protection Permit No.  
0169205-001-JC; Effective Date: 11/3/2000; Expiration Date: 7/17/2005.

1.5 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-01 Preconstruction Submittals

Environmental Protection Plan; G|PD

Within 10 calendar days after the date of Notice to Proceed, the Contractor shall submit an Environmental Protection Plan for review and acceptance by the Contracting Officer. The Government will consider an interim plan for the first 20 days of operations. However, the Contractor shall furnish an acceptable final plan no

later than 20 calendar days after receipt of Notice to Proceed. Acceptance of the Contractor's plan shall not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures.

Acceptance of the plan is conditional and predicated on satisfactory performance during construction. The Government reserves the right to require the Contractor to make changes to the Environmental Protection Plan or operations if the Contracting Officer determines that environmental protection requirements are not being met. No physical work at the site shall begin prior to acceptance of the Contractor's plan or an interim plan covering the work to be performed. The Environmental Protection Plan shall include but not be limited to the following:

a. A list of Federal, State, and local laws, regulations, and permits concerning environmental protection, pollution control, and abatement that are applicable to the Contractor's proposed operations and the requirements imposed by those laws, regulations, and permits.

b. Methods for protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archeological, and cultural resources.

c. Procedures to be implemented to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall provide written assurance that immediate corrective action will be taken to correct pollution of the environment due to accident, natural causes, or failure to follow the procedures set out in accordance with the environmental protection plan.

d. A permit or license for and the location of the solid waste disposal area.

e. Drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossing, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials.

f. Environmental monitoring plans for the job site, including land, water, air, and noise monitoring.

g. Traffic control plan.

h. Methods of protecting surface and ground water during construction activities.

i. Spill prevention. The Contractor shall specify all potentially hazardous substances to be used on the job site and intended actions to prevent accidental or intentional introduction

of such materials into the air, ground, water, wetlands, or drainage areas. The plan shall specify the Contractor's provisions to be taken to meet Federal, State and local laws and regulations regarding labeling, storage, removal, transport, and disposal of potentially hazardous substances.

j. Spill contingency plan for hazardous, toxic, or petroleum material.

k. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. Plan should include measures for marking the limits of use areas.

l. Plan of borrow area(s).

m. A statement as to the person who shall be responsible for implementation of the Environmental Protection Plan. The Contractor personnel responsible shall report directly to the Contractor's top management and shall have the authority to act for the Contractor in all environmental protection matters.

n. Recycling and Waste Management Plan. Executive Order 12873 of 20 October 1993 requires a number of considerations in planning a project. Fallen trees should not be burned or buried. Mulching, composting, and other uses for trees should be considered. Also, recovery of metals at the job site, including aluminum cans, should be considered with proceeds to be retained by the Contractor. Non-Federal recycling and waste minimization efforts shall also be incorporated into this plan.

o. A Certification Letter must be signed acknowledging the Contractor has a copy of all permits applicable to the project and understands the conditions in the permit. The Certification Letter shall be attached to the Environmental Protection Plan (A sample Certification Letter is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below).

p. Operational plan to achieve protection of sea turtles during hopper dredge(s) operation.

#### SD-02 Shop Drawings

Turtle Deflector Device; G|COR

If the Contractor proposes to use a hopper dredge for this work, detail drawings shall be submitted showing the proposed device and its attachment to the Contractor's equipment. Contractor's drawings to be submitted shall include the approach angle for any and all depths to be dredged during this contract. A copy of the approved drawings and calculations shall be available on the vessel during the life of this contract. No dredging work shall be allowed to commence until approval of the turtle deflector device.

SD-07 Certificates

Sea Turtle Trawling and Relocation (For Hopper Dredges Only) Permit

The Contractor shall submit a certified copy of National Marine Fishery Service (NMFS) permit for sea turtle trawling and relocation as well as a statement as to the person responsible for implementation of the NMFS permit.

SD-11 Closeout Submittals

Logs/Final Summary Report

Contractor shall submit as specified, logs and final summary report of sightings and incidents with endangered species.

Project Environmental Summary Sheet

Contractor shall submit within 30 days following completion of the project, a written report of the absence or occurrence of environmental incidents. In addition, for construction activities whose anticipated duration is more than one calendar year, the Contractor shall complete a sheet each May 31st (plus/minus 14 days).

Hopper Dredge(s) Recording Chart(s)

Contractor shall submit as specified, a copy of the hopper dredge(s) output recording chart(s) for each day's operation on a daily basis.

1.6 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors shall be the responsibility of the Contractor.

1.7 NOTIFICATION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the aforementioned Federal, State or local laws or regulations, permits and other elements of the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails 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 time extensions shall be granted or costs or damages allowed to the Contractor for any such suspension.

Additionally, the Contractor shall notify the Contracting Officer, in writing, of the absence or occurrence of environmental incidents, as required on the Project Environmental Summary Sheet, copy on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. Refer to

paragraph SUBMITTALS above.

#### 1.8 CONTRACTOR PERSONNEL QUALIFICATIONS IN POLLUTION CONTROL

The Contractor's personnel shall be qualified to perform all phases of environmental protection, including methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and careful installation and monitoring of the project to ensure adequate and continuous environmental pollution control. Quality Control and supervisory personnel shall be thoroughly knowledgeable of Federal, State and local laws, regulations, and permits as listed in the Environmental Protection Plan submitted by the Contractor. Quality Control personnel will be identified in the Quality Control Plan submitted in accordance with Section 01452 DREDGING/BEACH FILL PLACEMENT - CONTRACTOR QUALITY CONTROL.

#### PART 2 PRODUCTS (NOT APPLICABLE)

#### PART 3 EXECUTION

##### 3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

For contract work, the Contractor shall comply with all applicable Federal, State or local laws and regulations. The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected at least during the entire period of this contract. The Contractor shall confine his activities to areas defined by the drawings and specifications. Deviations from drawings or specifications (e.g., proposed alternate borrow areas, disposal areas, staging areas, and alternate access routes) could result in the need for the Government to reanalyze and re-approve the project from an environmental standpoint. Environmental protection shall be as stated in the following subparagraphs.

##### 3.1.1 General Project Environmental Design and Installation Criteria

Some project sites have features that shall not be impacted in any way, including cultural, historic, or archeological features. At all sites, project plans should minimize disturbance to existing features at the site to the extent possible, including vegetative, topographic, and drainage pattern features. Wetland impacts (temporary access, detours, staging areas, and other work area impacts) to project sites should be avoided and may require separate permitting action. Any wetlands temporarily impacted shall have its soil restored upon project completion. Expansion of previously permitted project footprints may likewise require separate permitting action.

In all cases, the design and/or installation of project system shall provide for protection of the environment during handling, installing, storing, utilizing, transporting, servicing, testing, refilling, transferring, pumping, processing, removing waste products, repairing and maintaining systems and their components. Necessary design protection shall also be considered that would prevent contamination of the environment from impacts to the system caused by storm water runoff and

flooding. Retrofit of connected systems on project sites to modern environmental protection design standards shall also be considered.

In the event environmental protection measures fail, the Contractor shall implement procedures to control and correct environmental damage.

#### 3.1.1.1 Sewage-Based Systems Environmental Design and Installation Criteria

In general, there shall be no waste or debris discharges of any kind for a project unless authorized by the Contracting Officer. This shall include the Contractor's providing sufficient temporary sanitary equipment and facilities for the project. The design and/or installation of temporary or permanent sewage systems shall ensure that waters will be free of effects of sewage discharges. Applicable Federal, State or local codes and requirements regarding sewage shall be strictly adhered to in the design, such as those of the EPA and, in the case of the State, Chapter 62-620 (Wastewater Facilities) of the FAC. Best Management Practices from the applicable agencies shall also be adhered to in the design.

#### 3.1.2 Protection of Land Resources

Prior to the beginning of any construction, the Contractor shall identify all land resources to be preserved or avoided within the Contractor's work area. Materials displaced into uncleared areas shall be removed. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, topsoil, and land forms without special permission from the Contracting Officer. The Contractor shall engage a qualified tree surgeon to perform all tree surgery. The Contractor shall be responsible to repair injuries to bark, trunk, branches, and roots of protected trees by dressing, cutting, and painting as specified for Class I Fine Pruning, of the National Arborist Association Pruning Standards for Shade Tree or as per State's Agricultural Extension Agency Guidelines, immediately as occurrences arise. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

##### 3.1.2.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas that are not required to accomplish all work to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. The Contractor shall protect from damage all existing trees designated to remain. Protection of tree roots shall be provided against noxious materials in solution caused by run-off or spillage. Fires shall be located outside the canopy of protected trees. No materials, trailers, or equipment shall be stored within the drip line of any protected tree. Monuments and markers shall be protected before construction operations commence. Where construction operations are to be conducted during darkness, the markers shall be visible. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

The Contractor shall thoroughly clean all construction equipment and tools at the prior job site in a manner that ensures all residual soil is removed and that egg deposits from plant pests are not present. The Contractor shall consult with the U.S. Department of Agriculture (USDA) regarding additional cleaning requirements that may be necessary. In addition, if this contract involves the identification, shipping, storage, testing, or disposal of soils from such a quarantined area, the Contractor agrees to comply with the provisions of COE ER 1110-1-5 and attachments. The Contractor agrees to assure compliance with this obligation by all subcontractors.

#### 3.1.2.2 Contractor Facilities and Other Work Areas

The Contractor's field offices, staging areas, stockpile storage, and temporary buildings shall be placed in areas designated on the drawings or as directed by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made when approved by the Contracting Officer. Borrow areas shall be managed to minimize erosion and to prevent sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be managed and controlled to limit spoil intrusion into areas designated on the drawings and to prevent erosion of soil or sediment from entering nearby watercourses, wetlands, or lakes. Spoil areas shall be developed in accordance with the grading plan indicated on the drawings. Temporary excavation and embankments for plant and/or work areas shall be controlled to protect adjacent areas from despoilment. If there is suspicion that sediment may be unsuitable for disposal at a specified location, the Contractor shall immediately take measures to contain the suspect sediment and notify the Contracting Officer.

#### 3.1.2.3 Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. Solid waste materials shall be hauled to an approved solid waste disposal site designated by the Contracting Officer. The Contractor shall comply with Federal, State and local regulations pertaining to the use of the solid waste disposal site.

#### 3.1.2.4 Fuel, Oil, and Lubricants

Fuel, oil, and lubricants shall be managed so as to prevent spills and evaporation. To prevent spills, fuel dispensers shall have a 4-foot square, 16-gauge metal pan with borders banded up and welded at corners right below the bibb. Edges of the pans shall be 8-inch minimum in depth to ascertain that no contamination of the ground takes place. Pans shall be cleaned by an approved method immediately after every dispensing of fuel and wastes disposed of offsite in an approved area. Should any spilling of fuel occur, the Contractor shall immediately recover the contaminated ground and dispose of it offsite in an approved area. Petroleum waste generated shall be stored in marked corrosion-resistant containers and recycled or disposed of in accordance with 40 CFR 279, State and local regulations.

3.1.2.5 Hazardous Waste

Hazardous wastes are defined in 40 CFR 261. The Contractor shall ensure that hazardous wastes are stored and disposed of in accordance with 40 CFR 261 and State and local regulations. The Contractor shall ensure that hazardous wastes are packed, labeled, and transported in accordance with 49 CFR 173 and State and local regulations.

3.1.2.6 Hazardous Materials

The Contractor shall ensure that hazardous materials are labeled, stored, and transported in accordance with 49 CFR 173, State and local regulations.

3.1.2.7 Disposal of Other Materials

Other materials than previously discussed (Construction and Demolition, vegetative waste, etc.) shall be handled as directed.

3.1.3 Preservation and Recovery of Historic, Archeological, and Cultural Resources

3.1.3.1 Applicable Law

A number of Federal laws require protection of cultural resources. Two laws, in particular, can be potentially involved with dredging activities: (1) the National Historic Preservation Act, as amended; and, (2) the Abandoned Shipwreck Act.

3.1.3.2 Known Resources

If known historic, archeological and cultural resources within the Contractor's work area(s) are present, it will be designated as a "sensitive environmental area" on the contract drawings or other documents. If so designated, the Contractor shall install protection for these resources and shall be responsible for their preservation during the contract's duration. The Contractor shall not distribute maps or other information on these resource locations except for distribution among the Contractor's staff with a "need to know" technical responsibility for protecting the resources.

3.1.3.3 Inadvertent Discoveries

If, during or other construction activities, the Contractor observes items that may have historic or archeological value, such observations shall be reported immediately to the Contracting Officer so that the appropriate Corps staff may be notified and a determination for what, if any, additional action is needed. Examples of historic, archeological and cultural resources are bones, remains, artifacts, shell, midden, charcoal or other deposits, rocks or coral, evidences of agricultural or other human activity, alignments, and constructed features. The Contractor shall cease all activities that may result in the destruction of these resources and shall prevent his employees from further removing, or otherwise damaging, such resources.

The possibility of encountering submerged cultural resources is inherent in dredging and snagging operations. Such findings could include shipwrecks, shipwreck debris fields (such as streamed engine parts), prehistoric watercraft (such as log "dugouts"), and other structural features intact or displaced. The materials may be deeply buried in sediment, resting in shallow sediments or above them, or protruding into water. Suspected cultural materials inadvertently gathered from a water-saturated context should be kept moist by re-immersion, spraying, or some other expedient means of wetting until the appropriate Corps staff provide further directives. No interviews or other contact with media shall occur without clear authorization from the Contracting Officer or the appropriate Corps representative.

#### 3.1.3.4 Claims for Downtime due to Inadvertent Discoveries

Upon discovery and subsequent reporting of a possible inadvertent discovery of cultural resources, the Contractor shall seek to continue work well away from, or otherwise protectively avoiding, the area of interest, or in some other manner that strives to continue productive activities in keeping with the contract. Should an inadvertent discovery be of the nature that substantial impact(s) to the work schedule are evident, such delays shall be coordinated with the Contracting Officer. Contract adjustments resulting from compliance with this paragraph shall be determined in accordance with Clause DIFFERING SITE CONDITIONS of Section 00700 CONTRACT CLAUSES.

#### 3.1.4 Protection of Water Resources

The Contractor shall keep construction activities under surveillance, management, and control to avoid pollution of surface, ground waters, and wetlands. The Contractor shall plan his operation and perform all work necessary to minimize adverse impact or violation of the water quality standard. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract. The Contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. There shall be no storage or stockpiling of equipment, tools, or materials within wetlands or along the shoreline within the littoral zone unless specifically authorized.

##### 3.1.4.1 Washing and Curing Water

Waste waters directly derived from construction activities shall not be allowed to enter water areas. These waste waters shall be collected and placed in retention ponds where suspended materials can be settled out or the water evaporates so that pollutants are separated from the water. Analysis shall be performed and results reviewed and approved by Corps staff before water in retention ponds is discharged.

##### 3.1.4.2 Monitoring of Water Areas

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction

activities shall be monitored by the Contractor.

#### 3.1.4.3 Turbidity

The Contractor shall conduct his operations in a manner to minimize turbidity. Refer to Section 01411 TURBIDITY AND DISPOSAL MONITORING for further instructions.

#### 3.1.4.4 Oil, Fuel, and Hazardous Substance Spill Prevention and Mitigation

The Contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, local bodies of water, or wetlands. This shall be accomplished by design and procedural controls. In the event that a spill occurs despite the design and procedural controls, the following shall occur:

(1) Immediate action shall be taken to contain and cleanup any spill of oil, fuel or other hazardous substance.

(2) Spills shall be immediately reported to the Contracting Officer.

(3) Spill contingency planning shall be strictly in accordance with the criteria of 40 CFR, Part 109.

(4) To control the spread of any potential spill, absorbent materials shall be readily available and capable of absorbing the contents of the single largest tank.

(5) To control the spread of any potential spill, the Contractor shall provide a written certification of commitment of manpower, equipment, and materials required to expeditiously cleanup and dispose of spill materials.

a. Spill Preventive Systems: System design and installation requirements have been discussed at the beginning of this Section. Temporary or portable tanks shall conform to applicable Federal, State and local codes and requirements and shall not be placed where they may be affected by storm, flooding, or washout. Diversionary structures for spills shall be put in place in advance where practical. Both spill preventive systems and any deviations from associated requirements must be approved by the Contracting Officer prior to implementation.

b. Liabilities: The Contractor shall be liable in the amounts established in 40 CFR, Part 113 when it can be shown that oil was discharged as a result of willful negligence or willful misconduct. The penalty for failure to report the discharge of oil shall be in accordance with the provision of 33 CFR, Part 153.

#### 3.1.5 Protection of Fish and Wildlife Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize interference with, disturbance to, and

damage of fish and wildlife. Species that require specific attention along with measures for their protection shall be listed in the Contractor's Environmental Protection Plan prior to the beginning of construction operation.

In the event that a threatened or endangered species is harmed as a result of construction activities, the Contractor shall cease all work and notify the Contracting Officer. The order of contact within the Corps of Engineers shall be as follows:

Order of Contact of Corps Personnel

<u>Title</u>	<u>Telephone Number</u>	
	<u>Work Hours</u>	<u>After Hours</u>
Corps, Inspector	On site	Lodging Location
Mr. George Cooper, Area Engineer, (CESAJ-CO-W)	561-626-5299	To be Provided
Mr. Loren Mason, Chief, Environmental Branch, Planning Division (CESAJ-PD-E)	904-232-2202	To be Provided
<del>Mr. Charles McGehee</del> , Chief, Construction Branch, Construction-Operations Division (CESAJ-CO-C)	904-232-1122	To be Provided
<del>Mr. Gordon M. Butler, Jr.</del> , Chief, Construction-Operations Division (CESAJ-CO)	904-232-3765	To be Provided

3.1.5.1 Endangered Species Protection

The Contractor shall instruct all personnel associated with the project of the potential presence of manatees, and sea turtles, dolphins and whales in the area, and the need to avoid collisions with and harming these animals. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees, or sea turtles, dolphins or whales which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and/or the Florida Manatee Sanctuary Act. The Contractor shall be held responsible for any manatee, sea turtle, or whale harmed, harassed, or killed as a result of construction activities.

a. Siltation Barriers: If siltation barriers are used, they shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.

b. Special Operating Conditions:

(1) All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom, and vessels shall follow routes of deep water whenever possible. Boats used to transport personnel shall be

shallow-draft vessels, preferably of the light-displacement category, where navigational safety permits. Mooring bumpers shall be placed on all barges, tugs, and similar large vessels wherever and whenever there is a potential for manatees to be crushed between two moored vessels. The bumpers shall provide a minimum stand-off distance of four feet.

(2) If a manatee(s) is sighted within 100 yards of the project area, all appropriate precautions shall be implemented by the Contractor to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. If a manatee is closer than 50 feet to moving equipment or the project area, the equipment shall be shut down and all construction activities shall cease within the waterway to ensure protection of the manatee. Construction activities shall not resume until the manatee has departed the project area.

(3) Dredging operations shall cease if 3 turtles are taken until the Contracting Officer notifies the Contractor to resume dredging.

c. Manatee Monitoring (Clamshell Only): During clamshell dredging operations, a dedicated observer shall monitor for the presence of manatees. The dedicated observer shall have experience in manatee observation and be equipped with polarized sunglasses to aid in observing. If manatees are present, the observer shall document all activities with the use of a video camera with the capabilities of video taping at night. The video tape shall have date/time signature and record all manatee movements in the construction area and note any reactions to turbidity, sound, and light. Nighttime lighting of waters within and adjacent to the work area shall be illuminated, using shielded or low-pressure sodium-type lights, to a degree that allows the dedicated observer to sight any manatee on the surface within 200 feet of the operation. The dredge operator shall gravity-release the clamshell bucket only at the water surface, and only after confirmation that there are no manatees within the safety distance identified in the standard construction conditions. The Contractor shall forward 3 copies to Chief, Environmental Branch, P.O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of completion of the dredging.

d. Manatee Signs: Prior to commencement of construction, each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8-1/2" x 11" reading, "CAUTION: MANATEE HABITAT/IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA." In the absence of a vessel, a temporary 3' x 4' sign reading "CAUTION: MANATEE AREA" shall be posted adjacent to the issued construction permit. A second temporary sign measuring 8-1/2" x 11" reading "CAUTION: MANATEE HABITAT. EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION" shall be posted at the dredge operator control station and at a location prominently adjacent to the issued construction permit. The Contractor shall remove the signs upon completion of construction. Sample Manatee

Caution Signs are on the web site indicated in the paragraph  
CONSTRUCTION FORMS AND DETAILS below.

#### 3.1.5.2 Endangered Species Observers (Hopper Dredge Only)

During dredging operations, an observer approved by the National Marine Fisheries Service (NMFS) for sea turtles and whales shall be aboard to monitor for the presence of the species. During transit to and from the disposal area, the observer shall monitor from the bridge during daylight hours for the presence of endangered species, especially the right whale, during the period December through March. During dredging operations, the observer shall monitor the inflow screening for turtles and/or turtle parts.

a. Observation Sheets: The results of the monitoring shall be recorded on the appropriate observation sheet. An observation sheet shall be completed for each dredging cycle whether or not sea turtle or sea turtle parts are present. Sample observation sheets are on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

b. Endangered Species Observer(s): NMFS-approved firms shall provide and manage the endangered species observer(s). A list of acceptable firms can be obtained by contacting NMFS Chief of Office of Protective Species in St. Petersburg, Florida at 727-570-5312. The trained observer(s) shall require quarters on board the dredge.

#### 3.1.5.3 Manatee, Sea Turtle, and Whale Sighting Reports

Any take concerning a manatee, sea turtle, or whale or sighting of any injured or incapacitated manatees, sea turtles, or whales shall be reported immediately to the Corps of Engineers by notifying the personnel indicated in the table "Order of Contact of Corps Personnel" above.

A copy of the incidental take report shall be provided within 24 hours of the incident. The Contractor shall also immediately report any collision with and/or injury to a manatee to the Florida Marine Patrol "Manatee Hotline" 1-800-342-5367 as well as the U.S. Fish and Wildlife Service, Vero Beach Field Office 561-562-3909 for South Florida.

#### 3.1.5.4 Disposition of Turtles or Turtle Parts

All turtles lethally taken by the dredge shall have a tissue sample collected for ~~genetic~~ genetic analysis by the observer. The observer shall follow the NMFS "Protocol for Collecting Tissue from Dead Turtles for Genetic Analysis" posted on the web site indicated in the paragraph CONSTRUCTION FORMS AND DETAILS below. After sample collection, positively identified turtle parts shall be disposed of in accordance with the direction of the Contracting Officer. Turtle parts which cannot be positively identified on board the dredge or barge(s) shall be preserved by the observer(s) for later identification. Observer(s) shall measure, weigh, tag, and release any uninjured turtles incidentally taken by the dredge. Observer(s) (or their authorized representative) shall transport, as soon as possible, any injured turtles to a rehabilitation facility such as Sea World at Orlando, Florida.

### 3.1.5.5 Report Submission

The Contractor shall maintain a log detailing all incidents, including sightings, collisions with, injuries, or killing of manatees, sea turtles, or whales occurring during the contract period. The data shall be recorded on forms provided by the Contracting Officer (sample forms are on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below). All data in original form shall be forwarded directly to Chief, Environmental Branch, P. O. Box 4970, Jacksonville, Florida, 32232-0019, within 10 days of collection and copies of the data shall be supplied to the Contracting Officer. Following project completion, a report summarizing the above incidents and sightings shall be submitted to the following:

Florida Fish and Wildlife Conservation Commission  
Bureau of Protected Species Management  
620 South Meridian Street  
Tallahassee, Florida 32399-1600

Chief, Environmental Branch  
U.S. Army Corps of Engineers (CESAJ-PD-E)  
P.O. Box 4970  
Jacksonville, Florida 32232-0019

Area Engineer,  
U.S Army Corps of Engineers (CESAJ-CO-W  
South Florida Area Office  
4400 PGA Blvd., Suite 203  
Palm Beach Gardens, Florida 33410

National Marine Fisheries Service  
Protected Species Management Branch  
9721 Executive Center Drive  
St. Petersburg, Florida 33702

### 3.1.5.6 Hopper Dredge Equipment

Hopper dredge drag heads shall be equipped with rigid sea turtle deflectors which are rigidly attached. No dredging shall be performed by a hopper dredge without a turtle deflector device that has been approved by the Contracting Officer. Sample Turtle Deflector Design Details are on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

#### a. Deflector Design:

(1) The leading vee-shaped portion of the deflector shall have an included angle of less than 90 degrees. Internal reinforcement shall be installed in the deflector to prevent structural failure of the device. The leading edge of the deflector shall be designed to have a plowing effect of at least 6" depth when the drag head is being operated. Appropriate instrumentation or indicator shall be used and kept in proper calibration to insure the critical "approach angle". (Information Only Note: The design "approach angle" or the angle of lower drag head pipe relative to the average sediment plane is very important

to the proper operation of a deflector. If the lower drag head pipe angle in actual dredging conditions varies tremendously from the design angle of approach used in the development of the deflector, the 6" plowing effect does not occur. Therefore, every effort should be made to insure this design "approach angle" is maintained with the lower drag pipe.)

(2) If adjustable depth deflectors are installed, they shall be rigidly attached to the drag head using either a hinged aft attachment point or an aft trunnion attachment point in association with an adjustable pin front attachment point or cable front attachment point with a stop set to obtain the 6" plowing effect. This arrangement allows fine-tuning the 6" plowing effect for varying depths. After the deflector is properly adjusted there shall be NO openings between the deflector and the drag head that are more than 4" by 4".

b. In Flow Basket Design:

(1) The Contractor shall install baskets or screening over the hopper inflow(s) with no greater than 4" x 4" openings. The method selected shall depend on the construction of the dredge used and shall be approved by the Contracting Officer prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s). The screens and/or baskets shall remain in place throughout the performance of the work.

(2) The Contractor shall install and maintain floodlights suitable for illumination of the baskets or screening to allow the observer to safely monitor the hopper basket(s) during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow baskets or screens to allow the observer to inspect for turtles, turtle parts or damage.

c. Hopper Dredge Operation:

(1) The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles and to comply with the requirements stated in the Incidental Take Statement provided by the National Marine Fisheries Service in their Biological Opinion.

(2) The turtle deflector device and inflow screens shall be maintained in operational condition for the entire dredging operation.

(3) When initiating dredging, suction through the drag heads shall be allowed just long enough to prime the pumps, then the drag heads must be placed firmly on the bottom. When lifting the drag heads from the bottom, suction through the drag heads shall be allowed just long enough to clear the lines, and then must cease. Pumping water through the drag heads shall cease while maneuvering or during travel to/from the disposal area.

(Information Only Note: Optimal suction pipe densities and

velocities occur when the deflector is operated properly. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency which reduces total dredging hours and "turtle takes." The operation of a drag head with teeth must be monitored for each dredged section to insure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators should configure and operate their equipment to eliminate all low level suction velocities. Pipe plugging in the past was easily corrected, when low suction velocities occurred, by raising the drag head off the bottom until the suction velocities increased to an appropriate level. Pipe plugging cannot be corrected by raising the drag head off the bottom. Arrangements of teeth and/or the reconfiguration of teeth should be made during the dredging process to optimize the suction velocities.)

(4) Raising the drag head off the bottom to increase suction velocities is not acceptable. The primary adjustment for providing additional mixing water to the suction line should be through water ports. To insure that suction velocities do not drop below appropriate levels, the Contractor's personnel shall monitor production meters throughout the job and adjust primarily the number and opening sizes of water ports. Water port openings on top of the drag head or on raised stand pipes above the drag head shall be screened before they are utilized on the dredging project. If a dredge section includes sandy shoals on one end of a tract line and mud sediments on the other end of the tract line, the Contractor shall adjust the equipment to eliminate drag head pick-ups to clear the suction line.

(5) Near the completion of each payment section, the Contractor shall perform sufficient surveys to accurately depict those portions of the acceptance section requiring cleanup. The Contractor shall keep the drag head buried a minimum of 6 inches in the sediment at all times. Although the over depth prism is not the required dredging prism, the Contractor shall achieve the required prism by removing the material from the allowable over depth prism.

(6) During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.

(7) These operational procedures are intended to stress the importance of balancing the suction pipe densities and velocities in order to keep from taking sea turtles. The Contractor shall develop a written operational plan to minimize turtle takes and submit it as part of the Environmental Protection Plan.

(8) The Contractor must comply with all requirements of this specification and the Contractor's accepted Environmental

Protection Plan. The contents of this specification and the Contractor's Environmental Protection Plan shall be shared with all applicable crew members of the hopper dredge.

### 3.1.5.7 Recording Charts for Hopper Dredge(s)

All hopper dredge(s) shall be equipped with recording devices for each drag head that capture real time, drag head elevation, slurry density, and at least two of the following: Pump(s) slurry velocity measured at the output side, pump(s) vacuum, and/or pump(s) RPM. The Contractor shall record continuous real time positioning of the dredge, by plot or electronic means, during the entire dredging cycle including dredging area and disposal area. Dredge location accuracy shall meet the requirements of the latest version of COE EM 1110-1-1003. A copy of the EM can be downloaded from the following web site:

<http://www.usace.army.mil/inet/usace-docs/eng-manuals/em.htm>. The recording system shall be capable of capturing data at variable intervals but with a frequency of not less than every 60 seconds. All data shall be time correlated to a 24 hour clock and the recording system shall include a method of daily evaluation of the data collected. Data shall be furnished to the Contracting Officer for each day's operation on a daily basis. A written plan of the method the Contractor intends to use in order to satisfy these requirements shall be included with the Contractor's Quality Control Plan.

### 3.1.5.8 Sea Turtle Risk Assessment (For Hopper Dredges Only)

a. Sea Turtle Trawling and Relocation: A sea turtle risk assessment survey shall be conducted following the take of three sea turtles and continue until directed by the Contracting Officer. The results of each trawl shall be recorded on Sea Turtle Trawling Report on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. A final report shall be prepared and submitted to the Contracting Officer prior to re-commencement of dredging summarizing the results of the survey (with all forms and including total trawling times, number of trawls and number of captures). Any turtles captured during the survey shall be measured and tagged in accordance with standard biological sampling procedures with sampling data recorded on Sea Turtle Tagging and Relocation Report on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. Any captured sea turtles shall be relocated south of the work area at least 3 miles from the location recorded on the Sea Turtle Tagging and Relocation Report form.

b. Sea Turtle Trawling Procedures: An approved sea turtle trawling and relocation supervisor shall provide researchers and nets to capture and relocate sea turtles, shall conduct Sea Turtle Risk Assessment Survey, and shall conduct any initiated sea turtle trawling. Turtles shall be captured with trawl nets to determine their relative abundance in the channel during dredging. Methods and equipment shall be standardized including data sheets, nets, trawling direction to tide, length of station, length of tow, and number of tows per station. Data on each tow shall be recorded using Sea Turtle Trawling Report on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. The trawler shall be equipped with two 60-foot nets constructed from

8-inch mesh (stretch) fitted with mud rollers and flats as specified in Turtle Trawl Nets Specifications appended to the end of this Section. Paired net tows shall be made for 10 to 12 hours per day or night. Trawling shall be conducted with the tidal flow using repetitive 15-30 minute (total time) tows in the channel. Tows shall be made in the center, green and red sides of the channel such that the total width of the channel bottom is sampled. Positions at the beginning and end of each tow shall be determined from GPS Positioning equipment. Tow speed shall be recorded at the approximate midpoint of each tow. Refer to COE EM 1110-1-1003, paragraph 5.3 and Table 5-1, for acceptable GPS criteria.

c. Water Quality and Physical Measurements: Water temperature measurements shall be taken at the water surface each day using a laboratory thermometer. Weather conditions shall be recorded from visual observations and instruments on the trawler. Weather conditions, air temperature, wind velocity and direction, sea state-wave height, and precipitation shall be recorded on the Sea Turtle Trawling Report on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. High and low tides shall be recorded.

d. Initiation of Trawling: Initiate trawling if three turtles are taken. The Contractor must initiate trawling and relocation activity in the dredging area within 8 hours of the occurrence of the take. Trawling shall continue until suspended by the Contracting Officer.

e. Approved Trawling Supervisor: Trawling shall be conducted under the supervision of a biologist approved by the NMFS. A letter of approval from NMFS shall be provided to the Contracting Officer prior to commencement of trawling.

f. Turtle Excluder Devices: Approval for trawling for sea turtles without Turtle Excluder Devices (TEDs) must be obtained from NMFS. Approval for capture and relocation of sea turtles must be obtained from the Florida Fish and Wildlife Conservation Commission (FF&WCC). Approvals must be submitted to the Contracting Officer prior to trawling.

g. Report Submission: Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer Office within 10 working days.

#### 3.1.5.9 Sea Turtle Beach Nest Monitoring

a. Turtle monitoring and nest location shall commence on the day Notice to Proceed is granted to the Contractor. Turtle monitoring and nest location/relocation activities are required through ~~November~~ May 30th or until completion of the work on Florida Beaches, whichever is earlier. The Contractor shall maintain contact with Ecological Associates (561-334-3729) during the sea turtle monitoring window.

b. Daily Visual Inspection: Turtle monitoring activities shall

include performance of daily visual inspections of the beach at sunrise by a person permitted by the FF&WCC for handling sea turtle eggs. Any nests discovered shall be excavated and relocated prior to 9:00 a.m. to a nearby self-release beach location where artificial lighting and/or other disturbances shall not interfere with successful incubation, hatching nor hatchling orientation. A log of the results of turtle egg monitoring and recovery activities shall be kept and a copy submitted weekly to the Chief, Environmental Branch, Jacksonville District (sample Marine Turtle Nesting Summary Report form is on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below).

c. Turtle Subcontractor: The Contractor shall have a FF&WCC permitted subcontractor approved by the Contracting Officer to accomplish the sea turtle monitoring of this section unless he demonstrates to the satisfaction of the Contracting Officer the capability to accomplish sea turtle monitoring and recovery by obtaining a permit from the FF&WCC to take turtles.

d. Report Submission: Following completion of the project, a copy of the Contractor's log regarding sea turtles shall be forwarded to the Chief, Environmental Branch and the Area Engineer Office.

#### 3.1.5.10 Beach Placement Restrictions

a. Equipment Lighting During Sea Turtle Nesting Period March 1 to November 15: Direct lighting of the beach and near shore waters shall be limited to the immediate construction area and shall comply with safety requirements. Lighting on offshore or onshore equipment shall be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the waters surface and nesting beach while meeting all Coast Guard, COE EM 385-1-1, and OSHA requirements. Light intensity of lighting plants should be reduced to the minimum standard required by OSHA for General Construction areas, in order not to misdirect sea turtles. Shields should be affixed to the light housing and be large enough to block light from all lamps from being transmitted outside the construction area. Refer to Beach Lighting Schematic on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below.

b. Pipeline Placement: Any construction pipes placed parallel to the shoreline shall be placed as far landward as possible up to the vegetated dune line.

c. Beach Tilling: Till the fill area between the landward edge and the seaward edge of the top of the berm with equipment operated so as to penetrate and loosen beach sand (a) to a depth of 36 inches and (b) laterally without leaving unloosened compact sand between the adjacent paths of tines or penetrating part of the equipment. (Suitable equipment is Caterpillar D9L/No. 9 Adjustable Parallelogram Multishank Ripper, or equal.) The Contractor shall be careful not to drag the beach where rock structures have been covered with less than 3 feet of sand.

3.1.5.11 Escarpments

Visual surveys for escarpments along the project area shall be made immediately after completion of the beach nourishment project. Results of the surveys shall be submitted to the Contracting Officer. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet or more shall be mechanically leveled by the Contractor to the natural beach contour. If the project is completed during the main part of the nesting season, escarpments may be required to be leveled immediately, while protecting nests that have been relocated or left in place.

3.1.5.12 Hardground/Reef Protection

Existing hardground/reef areas within the Contractor's work area will be so designated on the contract drawings and precaution will be taken to preserve these resources as they existed prior to construction. The Contractor shall install all protection for these resources so designated on the drawings and shall be responsible for their preservation during this contract. Pipelines will be placed only in approved areas and anchoring will be permitted in sandy areas only. Pipeline will be monitored for leaks. Any leaks that develop shall be repaired immediately, especially over hardgrounds/reefs, and the pumpout operations shall be shutdown until repairs are completed. Refer to Section 02391 BEACH FILL.

3.1.6 Seagrass Protection Measures

a. The Contractor shall instruct all personnel associated with the project of the presence of seagrasses, especially the Federally-listed threatened Johnson's Seagrass (*Halophlia johnsonii*), and the need to avoid contact with seagrasses.

b. All construction personnel shall be advised that there are civil and criminal penalties for harming or destroying seagrasses, especially Johnson's Seagrass which is protected under the Endangered Species Act of 1973, as amended. The Contractor may be held responsible for any seagrasses harmed or destroyed due to construction activities.

c. The Contractor shall not anchor, place pipeline, or stage equipment in a manner that will cause any damage to seagrasses or hardbottoms. Anchoring, placing pipeline, or staging equipment shall avoid these sensitive areas. If such activities cannot be done without affecting these sensitive areas, the activities shall cease and the Contracting Officer and Chief, Environmental Branch (904-232-1010) shall be immediately notified (no later than the morning following the next working day if the incident occurs after normal working hours). Any actual or potential incident involving damage to, or disturbance of, seagrasses or hardbottoms shall be reported.

3.1.7 Protection of Air Resources

The Contractor shall keep construction activities under surveillance, management, and control to minimize pollution of air resources. All activities, equipment, processes and work operated or performed by the

Contractor in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of Florida (Florida Statute, Chapter 403 and others and Chapters 200 series of the FAC) and all Federal emission and performance laws and standards, including the U.S. Environmental Protection Agency's Ambient Air Quality Standards. Information regarding Florida Statutes can be obtained from the following web sites:

<http://www.dep.state.fl.us/ogc/documents/statutes/text/403.doc>;

<http://www.dep.state.fl.us/ogc/documents/rules/aiur/62-213.doc>; and,

<http://www.dep.state.fl.us/ogc/documents/rules/mainrule.htm>.

#### 3.1.7.1 Particulates

Particulates, such as dust, shall be controlled at all times, including weekends, holidays, and hours when work is not in progress. The Contractor shall maintain excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and work areas within or outside the project boundaries free from particulates that would cause air pollution standards to be exceeded or that would cause a hazard or nuisance. The Contractor shall have the necessary equipment and approved methods to control particulates as the work proceeds and before a problem develops.

#### 3.1.7.2 Burning

All burning shall be subject to State and local requirements, including requirements for burn permits and bans during certain conditions such as droughts.

#### 3.1.7.3 Odors

Odors shall be controlled at all times for all construction activities.

#### 3.1.8 Protection of Sound Intrusions

The Contractor shall keep construction activities under surveillance and control to minimize damage to the environment by noise.

#### 3.2 POSTCONSTRUCTION CLEANUP

The Contractor shall clean up any area(s) used for construction.

#### 3.3 PRESERVATION AND RESTORATION OF LANDSCAPE AND MARINE VEGETATION DAMAGES

The Contractor shall restore all landscape features and marine vegetation damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be a part of the Environmental Protection Plan as defined in subparagraph "Environmental Protection Plan" of paragraph SUBMITTALS above. This work shall be accomplished at the Contractor's expense.

#### 3.4 MAINTENANCE OF POLLUTION CONTROL FACILITIES

The Contractor shall maintain all constructed facilities and pollution

control facilities and devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

### 3.5 CONSTRUCTION FORMS AND DETAILS

From the Jacksonville District Home Page, click the links ORGANIZATIONS, ENGINEERING, then CONSTRUCTION FORMS AND DETAILS. See web site address [www.saj.usace.army.mil/cadd/end/construction\\_forms\\_and\\_details.htm](http://www.saj.usace.army.mil/cadd/end/construction_forms_and_details.htm).

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SECTION 01411

TURBIDITY AND DISPOSAL MONITORING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, materials, and equipment, and performing all work required to obtain, analyze, and report the results of turbidity and disposal monitoring.

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-03 Product Data

Calibration Standard

The Contractor shall furnish to the Contracting Officer a copy of the operating instructions and standards used in calibrating equipment used in collecting samples for turbidity.

SD-06 Test Reports

Turbidity Monitoring

All required turbidity test reports shall be submitted (preferably by electronic mail) to the Contracting Officer, the Environmental Branch (CESAJ-PD-E), and the Florida Department of Environmental Protection (FDEP) within 7 days after completion of each test.

PART 2 PRODUCTS (NOT APPLICABLE)

PART 3 EXECUTION

3.1 MONITORING REQUIREMENTS

3.1.1 General

Nearshore or inland water samples shall be obtained and analyzed for turbidity. Sampling shall be conducted in accordance with techniques described in the latest edition of "Standard Methods" published by the American Public Health Association (APHA), American Waterworks Association

(AWWA), and Water Pollution Control Federation (WPCF), and other current techniques recognized by the scientific community and approved by the Jacksonville District, Corps of Engineers. Samples obtained for turbidity analysis shall be analyzed within 30 minutes of collection. Samples shall be taken with a sampler obtaining samples uncontaminated by water from any other depth.

#### 3.1.1.1 Turbidity Monitoring Equipment

Monitoring required for turbidity shall be measured in Nephelometric Turbidity Units (NTU) using a standard Nephelometer. Global Positioning System (GPS) is also required to record sampling stations.

#### 3.1.2 Dredging and Disposal Locations

Routine monitoring shall occur at the following locations:

##### 3.1.2.1 Station Descriptions

###### Borrow Site:

- a. Station 1 (Compliance Turbidity): No more than ~~4~~50 meters downcurrent of the dredge or point of discharge and in the direction of any visible plume.
- b. Station 2 (Background Turbidity): At least 150 meters upcurrent from the dredge or point of discharge and outside of any turbidity generated by the project.

###### Beach Nourishment Site:

- a. Station 1 (Compliance Turbidity): No more than 150 meters offshore and no more than 1,300 meters downcurrent of the dredge or point of discharge in the densest portion of any visible turbidity plume.
- b. Station 2 (Background Turbidity): At least ~~150~~1,000 meters upcurrent from the dredge or point of discharge and outside of any turbidity generated by the project.

##### 3.1.2.2 Turbidity

Samples to be analyzed for turbidity shall be taken twice daily (one between the hours of 12 midnight and 12 noon and the other between 12 noon and 12 midnight) at least 4 hours apart at surface and mid-depth at the following locations. Additional sampling shall be performed when the Contracting Officer determines that there may be non-compliance with water quality standards.

- a. Borrow Site Compliance at Station 1
- b. Borrow Site Background at Station 2
- c. Beach Nourishment Site Compliance at Station 1

d. Beach Nourishment Site Background at Station 2

3.2 TURBIDITY TESTS

3.2.1 Testing

The Contractor shall provide the Government with a certification, attesting to the accuracy of his testing equipment and procedure. The Contractor shall also provide the Contracting Officer with a duplicate of the standard used to calibrate his testing instrument as well as a complete set of operating instructions for the turbidity testing equipment. The Contractor and the Contracting Officer will use this standard throughout the project to maintain the calibration of the equipment. Whenever there is doubt as to the adequacy of the testing or validity of the results, the Contracting Officer may direct that additional tests be performed at no additional cost to the Government.

3.2.2 Reporting

The monitoring data shall be recorded on summary forms that contain the pertinent information in the following paragraphs. Example forms are on the web site indicated in paragraph CONSTRUCTION FORMS AND DETAILS below. Other data shall be submitted in the form supplied by the laboratory chosen to do the analysis. All data shall be forwarded (preferably electronically) to the Contracting Officer, Environmental Branch (CESAJ-PD-E), and FDEP within 24 hours of collection. Electronic mail addresses of the Corps and FDEP personnel to receive these reports are provided below. Reports shall be provided in a common format such as Excel Spreadsheet (.xls) files, Word (.doc) files, and Web Graphics (Joint Photographic Group or .jpg) files.

NAME	ORGANIZATION	E-MAIL ADDRESS
Paul Karch	USACE COR	Paul.J.Karch@usace.army.mil
Jennifer Brown	FDEP	Jennifer.Brown@dep.state.fl.us

3.2.2.1 Report Contents

- a. Permit application number.
- b. Dates of sampling and analysis.
- c. A statement describing the methods used in collection, handling, storage, and quality control methods used in the analysis of the samples.
- d. A map indicating the sampling location and plume configuration, if any.
- e. A map plotting the dredge location during each traverse through the borrow area. This map can be combined with the map indicating the sampling location.
- f. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection, and accuracy of the data.
- g. Results of the analyses.
- h. A description of any factors influencing the dredging or disposal

operation or the sampling program. Reports shall be furnished daily even when no sampling is conducted. When sampling is not conducted, a brief statement shall be given in the report explaining the reason for not conducting the sampling, such as "dredge not working due to mechanical problems" or "no sampling taken due to high seas".

i. State plane coordinates (x and y) shall be provided for all sampling stations along with the coordinates of the dredge and discharge pipe and the distance between the sampling station and dredge/discharge pipe for each sampling event.

#### 3.2.2.2 Monitoring Reports

Monitoring reports shall also include the following information for each day that samples are taken:

- a. Time of day and date samples were taken.
- b. Depth of water body.
- c. Depth of sample.
- d. Antecedent weather conditions.
- e. Tidal stage and direction of flow.
- f. Dredge or disposal location (station location and map).
- g. Water sample location.
- h. Wind direction and velocity.

#### 3.2.2.3 Notification

If turbidity exceeds background levels by more than 29 NTU, the Contractor shall immediately notify Chief, Environmental Branch at 904-232-2202 and the Contracting Officer, or on the morning of the following work day if it occurs after normal work hours. In addition, all dredging or disposal activity shall cease immediately and all measures to reduce turbidity shall be taken. Dredging or disposal shall not resume until corrective measures have been taken and turbidity has returned to acceptable levels as determined by proper testing described in subparagraph "Dredging and Disposal Locations" above.

#### 3.3 WORK DELAY

Delays in work due to the fault or negligence of the Contractor or the Contractor's failure to comply with this specification shall not be compensable. Any adjustments to the contract performance period or price that are required as a result of compliance with this section shall be made in accordance with the provisions of the Clause SUSPENSION OF WORK of Section 00700 CONTRACT CLAUSES.

#### 3.4 CONSTRUCTION FORMS AND DETAILS

From the Jacksonville District Home Page, click the links ORGANIZATIONS, ENGINEERING, then CONSTRUCTION FORMS AND DETAILS. See web site address [www.saj.usace.army.mil/cadd/end/construction\\_forms\\_and\\_details.htm](http://www.saj.usace.army.mil/cadd/end/construction_forms_and_details.htm).

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