



**CALOOSAHATCHEE RIVER (C-43)
WEST BASIN STORAGE RESERVOIR DESIGN UPDATE
SITE CLEARING**

SPECIFICATIONS

**Corrected Final/RTA Submittal
June 7, 2017**

**RFB 6000000839
PROJECT ID#: 100088**

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SECTION 01010 SUMMARY OF WORK

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: This SECTION summarizes the WORK of the Project as covered in detail in the complete Contract Documents. This is a general summary and is not intended to be complete and all-inclusive of the required WORK items.

1.02 SUBMITTALS:

- A. Submittals shall be in accordance with SECTION 01300.

1.03 PROJECT DESCRIPTION:

- A. Description of Project: The Caloosahatchee River (C-43) West Basin Storage Reservoir Project is located on approximately 10,500 acres of land located west and south of LaBelle, Florida and south of SR 80 in western Hendry County. This contract continues a series of preliminary work packages currently under way on the site. The Work in this contract includes, primarily, land clearing activities as specified herein and on the drawing(s) provided. This Summary of Work (SOW) is for the mechanical mowing of all vegetation within 2,000 linear feet of the perimeter property line, and one 2,000 linear foot wide north/south transecting line (see attached map). Additionally, the Contractor shall grub all cabbage palms throughout the project limits that are located outside of the perimeter and transecting line mowing areas. The mechanical mowing portion of the project is approximately 4,400 acres, and the remaining area is approximately 6,000 acres. The exact boundaries of the work area will be identified during the on-site inspections.
- B. The Work is divided into 2 (two) distinct land clearing activities as follows
 - 1. Areas 1 and 2 (interior reservoir) – Grubbing of all trees in the areas depicted. This Work includes leveling all trees on site including cabbage palm, oak, pine, eucalyptus, and any other trees exceeding 4' in height. Burning or removal of vegetation is not included in this contract. The grubbing portion of the project may be completed by using front end loaders equipped with root rakes and/or excavators.
 - 2. Area 3 (reservoir perimeter and separator dam footprint) generally defined as a 2000' wide clearing and grubbing activity along the proposed reservoir footprint. This Work includes leveling all trees on site including cabbage palm, oak, eucalyptus, and any other trees within the area defined. The remainder of all vegetation shall be mowed down to less than 6" in height using mechanical mowing equipment. Burning or removal of vegetation is not included in this contract. To perform the mechanical mowing portion of the project equipment such as, excavator mounted boom mowers, skid steer mowers or tractor mounted mowers will be required. Equipment mats may be necessary due to water level fluctuations and soil conditions. All debris (chips or shavings) generated by this type of equipment may be left in place. However, no more than 80% of the chipped material left in place shall be any larger than two inches (2") by twenty-four inches (24") in any one area. The Contractor shall distribute the chips evenly throughout the designated areas of the project site.
- C. Staging of equipment, fuel and materials shall be identified and approved by the District. All crews shall be equipped with fire extinguishers and spill prevention kits.
- D. Throughout the project limits there are drainage canals that must remain clear; therefore, trees and debris must be prevented from falling into the ditches. If a tree should fall into a ditch, all work must cease until the tree or debris is completely removed from the ditch. The CONTRACTOR is advised that the existing water supply and storm water management system, canals, pumps, ditches and culverts shall be maintained during the clearing activities included in this contract. These existing site features shall be immediately repaired and returned to the existing condition and flow capacity if damaged or filled in as a result of these activities. The site is susceptible to rainy season flooding and no dewatering activities are included in this contract. There may be times when certain areas are inaccessible during these periods

- and the contractor shall plan and sequence his work accordingly. The CONTRACTOR cannot expect optimal water levels to facilitate work and shall have no means to make a claim of delay related to periods of inundation. The CONTRACTOR shall plan its work accordingly.
- E. The CONTRACTOR shall use the access routes indicated on the drawing or as directed. Access along the perimeter powerline road south and west to S-476 shall not be used without permission of the District. At the end of each workday, the Contractor shall remove all debris (organic and inorganic) and equipment that may be blocking and/or restricting access along internal roads.
 - F. The CONTRACTOR shall abide by the requirements of the environmental permits issued for the Project. Trained wildlife observers shall survey the work fronts in advance of mechanical clearing and grubbing activities. All sightings shall be reported to the District. These requirements are attached in subsequent sections.
 - G. The CONTRACTOR is made aware that this is a large site containing multiple concurrent contracting activities associated with the Project. The CONTRACTOR will be required to coordinate with the District and other contractors on site where necessary.
 - H. The CONTRACTOR shall abide by easement requirements, permit requirements and access restrictions as required.
 - I. The Contractor shall be required to obtain a key permit from the District prior to the start of this project. The key permit application is available online at <http://my.sfwmd.gov/kpa/index.php?op=main>. There is a \$500.00 refundable key deposit associated with this permit.

1.04 RELATED CONTRACT ACTIVITIES:

- A. The CONTRACTOR shall provide adequate signage and stabilization to protect the general public as well as the job site.
- B. The CONTRACTOR shall coordinate his activities with that of any other contractors on working on site with the District.

1.05 WORK PERFORMED BY OTHERS:

- A. Florida Power and Light (FPL) will be working on site during certain phases of construction. Some existing power lines will be relocated or removed. New lines are currently anticipated along the northern reservoir border and the western border along the Townsend Canal.
- B. The local adjacent landowners are currently in active citrus production. The CONTRACTOR shall not restrict access to farming operations and shall coordinate with adjacent landowners as required.

1.06 CONTRACTOR'S USE OF PREMISES:

- A. See General Terms & Conditions Article 6.11.
- B. During construction activities, the CONTRACTOR shall be responsible for maintaining all access roads in good condition, including grading and drainage. See Section 00700 - General Terms & Conditions.
- C. The CONTRACTOR shall ensure that all construction equipment crossing the existing bridges, culverts and/or structures shall not exceed their maximum capacity. The CONTRACTOR shall verify the actual condition of the bridge and/or structure and indicate that the construction equipment crossing the bridges and/or structures will not adversely impact the structural integrity of the bridges and/or structures. It shall be the CONTRACTOR's sole responsibility to repair all damages to the bridges and/or structures which occur as a result of construction activities.
- D. The CONTRACTOR shall not interfere with the operations of any irrigation facilities including, but not limited to, pump stations, culverts, valves, canals and ditches. This does not apply to the drip irrigation pipe.

1.07 DISTRICT'S USE OF PREMISES:

- A. Partial DISTRICT Occupancy: The DISTRICT reserves the right to occupy and to place and install equipment in areas of the Project, prior to Substantial Completion provided that such occupancy does not interfere with completion of the WORK. Such placing of equipment and partial occupancy shall not constitute acceptance of the WORK.

1.08 WORK SEQUENCE, COORDINATION ACTIVITIES AND SCHEDULED DATES:

- A. General: The CONTRACTOR shall coordinate its WORK with other adjacent contractors, landowners and DISTRICT activities, with specific attention to access and staging areas. Construction sequence shall be determined by CONTRACTOR subject to the needs for continuous access and operation by others.
- B. Suggested Construction Sequence: The CONTRACTOR shall maintain farming (Berry Groves) access to the existing groves north of the project (north of the FPL transmission line). Farming vehicles will share a common entrance road to the project.
- C. Coordinate with grove operators to maintain and supply irrigation water to Berry Groves north of the FPL transmission line and the Bob Paul properties east of the Project during construction activities. The existing LaBelle Private Drainage District (LPDD) Pump Stations No. 1, 2 and 3 and the Header Canal from the Townsend Canal to the east Project boundary shall not be interfered with. The CONTRACTOR may suggest modifications to the sequence provided the access and operation requirements are satisfied and compliance with the overall contract period is achieved.
- D. Scheduled Events: Schedule the WORK to conform to the following events and dates, and to provide for coordination with the WORK performed by others.
 - 1. FPL work current timing not yet established.

1.09 WORK BREAKDOWN PERFORMANCE/PROCEDURES:

- A. TREE REMOVAL
 - 1. The work included in this Contract consists of furnishing all labor, material, equipment and performing of all work in strict accordance with the SOW and applicable requirements of the following standards:
 - a. American National Standards Institute (ANSI) Z133.1a: "Safety Requirements for Tree Care Operations - Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush."
 - b. American National Standards Institute (ANSI) Z133.1: Tree Care Operations - Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush."
 - c. American National Standards Institute (ANSI) A300: Tree Care Operations Tree, Shrub and Other Woody Plant Maintenance.
 - d. "Trees and Development – A technical Guide to Preservation of Trees", by Nelda Matheny & James R. Clark

1.10 WORK SCHEDULES:

- A. The Contractor shall provide a written work and payment schedule to the District's Project Manager and obtain approval of the work schedule from the District's Project Manager prior to beginning work. **Partial (percentage of work completed) payments shall only be approved if there is an approved incremental work schedule in effect.**

1.11 LIMIT OF OPERATIONS

- A. No work shall be done on Sundays or District recognized holidays, or any day between the hours of 7:00 p.m. and 7:00 a.m., unless permission in writing is obtained from the District Project Manager.

- B. The Contractor is responsible for verifying and conforming to all local noise ordinances.
- C. No equipment shall be operated that damages the pavement or turf areas adjacent to the work area unless permission in writing is obtained from the District Project Manager. The Contractor shall be responsible for and repair/replace to the satisfaction of the District's Project Manager all Contractor-induced damage to adjacent pavement or turf areas.

1.12 WEATHER

- A. The completion of this tree removal project is crucial to ensuring that the District will be able to move water freely in a storm event. Equally important is the full, unabated access of the entire right of way for emergency operations and/or inspection prior to, during and after a storm event. Therefore, the Contractor must remain apprised of all weather conditions that may affect the District's jurisdiction. If a major storm event is forecast to affect the District or if the District goes into Increased Readiness Condition, the Contractor shall clear the site of all-excess debris and equipment as directed by the District's Project Manager. When the District goes into Condition Three, which indicates that a major storm event is imminent, the Contractor will immediately remove any and all equipment and debris generated by this project from the right of way. If, after notification by the District's Project Manager that the District is in Condition Three, the Contractor appears to be unable to clear the right of way prior to a storm event, the District reserves the right to seek assistance from additional Contractor(s), to ensure that the right of way is clear prior to the storm. Solely at the discretion of the District, additional costs incurred in securing the right of way may be charged to the Contractor in the form of deductions from subsequent invoices.

1.13 UTILITIES

- A. It shall be the Contractor's responsibility to exercise caution near any utility. The District shall not be responsible for any damage done to any utility by the Contractor.
- B. The Contractor shall be responsible for and repair/replace all Contractor-induced damage to pavement, buildings, telephone or other cables, water and force main's, lights, light poles, irrigation systems, or other structures which may be encountered.
- C. It shall be the responsibility of the Contractor to verify the location of all such utilities, structures, etc., by hand excavation or other appropriate measures before performing any work that could result in damage or injury to persons, utilities, structures or property. The Contractor shall make a thorough search of the site for utilities, structures, etc., before work is commenced in any location.
- D. The Contractor shall not purposefully disrupt or disconnect any type of utility; electric or irrigation services whatsoever without first obtaining the written permission of the District Project Manager. Requests for disconnection must be in writing and received the District Project Manager at least seven (7) calendar days prior to the time of the requested interruption.
- E. The Contractor shall immediately take the necessary steps to repair, replace, or restore all services to any utilities or other facilities, which are disrupted due to his or her operations. Further, the Contractor shall engage any additional outside repairs on a continuous "around-the-clock" basis until services are restored. The Contractor shall also provide and operate any supplemental temporary services to maintain uninterrupted use of the facilities. All costs involved in the repairs and restoring of disrupted service resulting from negligence on the part of the Contractor shall be borne by the Contractor and the Contractor shall be fully responsible for all claims resulting from the damage.
- F. Should utilities, structures, etc., be encountered which interfere with the work, the District Project Manager or designee shall be consulted immediately for a decision to be made on the relocation of the work so it shall clear the obstruction, if the obstruction cannot be relocated.

1.14 SAFETY

- A. Safe work practices are required on this project. The CONTRACTOR shall provide a hazard analysis and conduct daily safety briefings with its crew (s) and coordinate with the District Site Safety representative. An Accident Prevention Plan, overhead electrical protection, emergency response service and Wildlife training will be required.

B. PERSONNEL

1. In performing the scope of work, all safety on or off the job site shall be the sole responsibility of the Contractor. The Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs about the work. The Contractor shall be responsible for protecting and safeguarding employees and the public about the work and job site. The District Project Manager shall not be responsible for safety on or off the job site. The District Project Manager's on-site observations or inspections shall be only for verifying that the work is being conducted in accordance with the contract. The District Project Manager's on-site observations or inspections are not for safety on or off the job site.
2. The Contractor shall provide and ensure employees wear protective clothing, safety shoes, hard hats, eye protection, ear (noise) protection, fluorescent safety vests and any other items required by laws, regulations, ordinances, and/or manufactures instructions for materials and equipment. The Contractor shall require all employees to wear uniforms consisting of at least a **Contractor's shirt** with the **company name** and **telephone number**.
3. The Contractor shall ensure that during this project there is a minimum crew size of three persons (each person to be qualified to perform the required tree services) with one English speaking supervisor per crew.
4. The Contractor shall have on site appropriate first-aid kits in accordance with ANSI - Z 308.1 - 1998.
5. The Contractor shall have on site and in good working condition, a capable communication system, (two-way radio and/or cellular phone).

C. EQUIPMENT

1. All equipment used shall be in good repair and operating condition and be compliant with all local, state, and federal regulations. Only equipment designed for performance of work described herein will be acceptable for operation. All equipment shall meet all safety requirements as established for this type of work. All equipment shall be operated and maintained in accordance with the manufacturer's recommendations. All equipment shall be equipped with all appropriate safety guards, as specified by the manufacturer.
2. All equipment left on the right-of-way unattended shall be parked as far away from the water's edge as possible. Unattended equipment shall be secured in a manner that will prevent its movement by unauthorized personnel. Security of the Contractor's equipment is the responsibility of the Contractor.
3. Equipment repairs on the District right-of-way shall be limited to maintenance related tasks. Major repairs shall not be made on District property.

1.15 COPIES OF DOCUMENTS:

- A. See Section 00700 - General Terms & Conditions Article 2.02.

1.16 LIST OF DRAWINGS:

- A. Drawings:

1. **C-43 West Storage Reservoir – Site Clearing Plan**

- B. Reference Materials:

1. The following reference materials are included as part of this solicitation. These materials are for reference only, are provided as-is, are not contractual documents, and do not replace the CONTRACTOR's due diligence in bid preparation.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01020 MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 SCOPE:

- A. LUMP SUM CONTRACT: Unless indicated on the Contract Documents, all work indicated on the Contract Drawings and specified in the Bid Documents and Contract shall be included in the Contract Sum indicated on the Bid Form. The following is a description of the WORK listed in the Bid Form and is not intended to be complete and all-inclusive of the required work items. The WORK shall include all miscellaneous and ancillary items necessary to construct a complete and functional Project.

1. Bid Item A. C-43 West Basin Storage Reservoir Site Clearing Project, Lump Sum.

1.02 BASIS FOR PAYMENTS:

- A. The above description generally outlines the scope of work required for those elements of the WORK to be paid for under a lump sum item listed in the Bid Form. The lump sum amount shall be further distributed in accordance with subvalues identified in the approved Cost Loaded Schedule specified in SECTION 01310 – COST LOADED CONSTRUCTION SCHEDULES and the GENERAL TERMS & CONDITIONS.

1.03 PAYMENTS:

- A. Payments shall be in accordance with the provisions of the GENERAL TERMS & CONDITIONS, Article 14.

END OF SECTION

PART 1 - GENERAL (See General Terms & Conditions Article 4.05 "Reference Points.")

1.01 SCOPE:

- A. Summary of Work:
 - 1. The CONTRACTOR shall engage a Professional Engineer of the discipline required, registered in the State of Florida, to perform engineering services for temporary facilities and similar items provided by the CONTRACTOR as part of its means and methods of construction.
 - 2. The CONTRACTOR shall engage a Professional Surveyor and Mapper licensed in the State of Florida to perform all necessary construction layout surveys, horizontal and vertical control, As-Built (Record) Surveys, and Topographic Surveys in accordance with Chapter 472.027 of the Florida Statutes and Chapter 5J-17 Florida Administrative Code (FAC) and these specifications.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – SUBMITTALS
 - 2. SECTION 01700 – CONTRACT CLOSEOUT
 - 3. SECTION 02200 – EARTHWORK

1.02 SUBMITTALS:

- A. Submit in accordance with SECTION 01300.

PART 2 - CONTRACTOR CONSTRUCTION LAYOUT SURVEY

2.01 DESCRIPTION: In connection with this WORK, the CONTRACTOR shall be responsible for:

- A. Performing all construction layout survey tasks as necessary for construction and satisfactory completion of the WORK.
- B. Performing at a minimum two (2) daily check measurements with RTK Global Positioning System (GPS) on a minimum of two (2) different Project control monuments in two (2) different satellite geometric layouts.
- C. Performing a peg test as necessary on all level equipment with needed adjustments to maintain the accuracy of the instruments.
- D. Keeping a record of all survey work in a survey field book in a clear, orderly, and neat manner consistent with standard surveying practices.

2.02 CONSTRUCTION REQUIREMENTS:

- A. The CONTRACTOR's personnel performing the construction layout survey shall work under the direct supervision of a Florida licensed Professional Surveyor and Mapper. Submit the name(s) and address(s) of the survey firms(s) responsible for the Project surveying requirements to the DISTRICT prior to start of survey activities.
- B. The CONTRACTOR shall be solely and completely responsible for the accuracy of the line and grade of all features of the WORK. Any errors or apparent discrepancies found in previous surveys, Drawings, or specifications shall be called to the attention of the DISTRICT by the CONTRACTOR for correction or interpretation prior to proceeding with the WORK.
- C. The CONTRACTOR shall be responsible for the placement, referencing, and preservation of all survey control points, whether set or found on the Project. All boundary corners (i.e. section corners, fractional section corners, similar Project survey monumentation) that may be lost, destroyed or disturbed during construction shall be carefully replaced and referenced by a Florida licensed Professional Surveyor and Mapper.

- D. The supervision of the CONTRACTOR's construction surveying personnel shall be the responsibility of the CONTRACTOR; any deficient surveying layout or construction WORK which may be the result of inaccuracies in construction layout survey operations or failure to report inaccuracies found in WORK shall be corrected at the expense of the CONTRACTOR.
 - E. In order to expedite the commencement of construction operations, the construction layout survey operation may commence prior to the issuance of the Notice to Proceed. The CONTRACTOR shall obtain written approval of the DISTRICT prior to commencing construction layout survey.
- 2.03 SURVEY STANDARDS: If the vertical and horizontal data needs to be established at the Project Site, the CONTRACTOR shall follow the following standards:
- A. Vertical Data:
 - 1. All vertical data shall be collected and displayed in North American Vertical Datum 88 (NAVD 88). All Vertical elevation control level runs shall start and end on National Geodetic Survey (NGS) Second Order or higher DISTRICT approved vertical control monuments. The CONTRACTOR shall use a minimum of two (2) different NGS Second Order or DISTRICT approved published benchmarks that are a minimum of one-half mile apart. The level run(s) between monuments must close on each other. If the monuments do not close on each other the surveyor shall re-do the level runs or use another NGS monument until the two (2) monuments used in the level run close. The level run shall close to within 0.03 feet $\sqrt{\text{miles}}$ (0.03 feet times the square root of the distance in miles).
 - B. All Vertical elevation control level runs shall start and end on National Geodetic Survey (NGS) Second Order or higher DISTRICT approved vertical control monuments.
 - 1. If elevations need to be converted to NGVD 29, use the CORPSCON 6.0.1 with the Corps of Engineers, South Atlantic Division's "vertcon 05.txt" file added.
 - C. A DISTRICT benchmark description sheet shall be completed for each benchmark established (set) for use in the Project. A DISTRICT benchmark description sheet shall be requested; if applicable, from the DISTRICT PM at the pre-construction meeting.
 - D. Horizontal Data (State Plane Coordinates):
 - 1. All horizontal data shall be collected in and based on the North American Datum (NAD 1983/2007) adjustment or higher. Horizontal coordinate control shall be established from existing NGS or DISTRICT approved Second Order control or higher in the area by using a minimum of conventional NGS Third Order field observation procedures. All horizontal work shall be done in the same horizontal adjustment (no mixing of the adjustments). Once the horizontal datum has been established it shall not change for the life of the project.
 - E. Cross-Sections: Provide a certified copy, in accordance with 2.04 below, of field measured cross-sections of the final pre-load embankments, prepared by a Professional Surveyor and Mapper licensed in the State of Florida for payment and record purposes, taken at 100-foot intervals as described in SECTION 02200 EARTHWORK.
- 2.04 RECORDS AND SUBMITTALS:
- A. Submittals shall be in accordance with SECTION 01300.
 - B. Provide DISTRICT a copy of the designs described in Paragraph 1.01 signed and sealed by the Florida registered Professional Engineer in charge of the Project.
 - C. Provide DISTRICT one (1) copy of the Preliminary Surveyor's Report (MS Word 2007), and two (2) copies of the final signed, sealed and certified Surveyor's Report to the DISTRICT.
 - 1. At a minimum, the report shall include: an overall Project description, location sketches, field notes, equipment used, photographs and a horizontal data (NAD 1983/2007 state plane coordinate (RTK)) on each new bench mark (if applicable).
 - 2. A CD containing: Surveyor's firm name and logo, Surveyor's Report, digital photographs, benchmark description sheets and any other associated data.

D. Records/As-builts:

1. The CONTRACTOR shall provide one (1) set of conventional certified As-Built Survey overlaid on the Drawings.
2. The CONTRACTOR shall provide a single PDF file with all data attached to that file and bookmark the As-Built.
3. The CONTRACTOR shall provide single AutoCAD (version 2010 or later) digital files for each of the certified hard copies.

END OF SECTION

SECTION 01065 PERMITS AND FEES

PART 1 - GENERAL

1.01 SCOPE:

A. Summary of Work:

1. Unless otherwise specified, the CONTRACTOR shall obtain and pay for all permits and licenses related to the WORK as provided for in the General Terms & Conditions.
2. The CONTRACTOR will be issued copies of all permits obtained by the DISTRICT at the pre-construction conference. A copy of the permits shall be posted at the Site at all times during construction. The CONTRACTOR shall be responsible for familiarizing himself with the permits and shall abide by the permit conditions at all times. Refer to Article 6.08 of the Supplemental Conditions for the list of permits that DISTRICT has obtained or is in the process of obtaining. These permits will include but may not be limited to the FDEP, the SFWMD and the USACE permits.
3. CONTRACTOR shall be responsible for obtaining all building permits from Hendry County as required but not limited to clearing and grubbing, demolition, installation of temporary construction trailers and temporary utilities in construction compound.
4. CONTRACTOR shall be responsible for obtaining permit(s) to burn material on site if required.
5. The WORK shall be conducted, and shall result in construction of the improvements of the Project, in full accordance with the conditions of the permits granted for the Project.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01200 PROJECT MEETINGS AND REPORTS

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: This SECTION includes the following administrative and procedural requirements:
 - 1. Project Meetings:
 - a. Preconstruction conference
 - b. Progress meetings
 - 2. Schedules and Reports:
 - a. Initial coordination submittals
 - b. Construction Schedules (See SECTION 01310)
 - c. Special reports
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – SUBMITTALS
 - 2. SECTION 01310 – COST LOADED CONSTRUCTION SCHEDULES

1.02 SUBMITTALS:

- A. All submittals shall be made in accordance with SECTION 01300– SUBMITTALS.

1.03 PROJECT MEETINGS:

- A. Pre-construction Conference
 - 1. The DISTRICT will administer a pre-construction conference within ten (10) days after the Effective Date of the Agreement, to review items stated in the following agenda and to establish a working understanding between the parties as to their relationships during conduct of the WORK.
 - 2. The Pre-construction conference shall be attended by:
 - a. The CONTRACTOR and his Project Superintendent
 - b. Representatives of principal Subcontractors and Suppliers
 - c. Engineer and his Resident Project Representative if any
 - d. The DISTRICT or its representative
 - e. Other affected parties determined by the DISTRICT
 - 3. Agenda:
 - a. Introduction and designation of responsible personnel.
 - b. Projected Construction Schedules
 - c. Critical Work sequencing
 - d. Designation of responsible personnel
 - e. Project coordination
 - f. Procedures and Processing of:

- i. Field decisions
 - ii. Substitutions
 - iii. Submittals
 - iv. Change Orders
 - v. Applications for payment
 - g. Procedures for testing
 - h. Procedures for maintaining record documents
 - i. Use of Premises:
 - i. Office, work and storage areas
 - ii. The DISTRICT's requirements
 - j. Construction facilities, controls, and construction aids
 - k. Temporary utilities
 - l. Safety and first aid
 - m. Security
 - n. Requirements of any permits obtained by the DISTRICT and/or the CONTRACTOR
4. Location of Meeting: To be designated by the DISTRICT.

B. Progress Meetings:

- 1. The DISTRICT will administer a progress meeting a minimum of once every week and at other times requested by the DISTRICT. The CONTRACTOR, Engineer and all Subcontractors active on the Site shall be represented at each meeting. The CONTRACTOR may request attendance by representatives of his Suppliers and other Subcontractors, or other entities concerned with the Project or involved with the planning, coordination or performance of future Project activities. All participants in the meeting shall be familiar with the Project and authorized to conclude matters relating to the WORK. The primary goal of the meetings is to be a reporting meeting. Should issues arise that require detailed attention, a separate meeting shall be scheduled.
- 2. The CONTRACTOR and each Subcontractor shall be prepared to report on and discuss the current construction progress, any anticipated future changes to the Construction Schedule, and advise if their current progress, and anticipated future schedules are compatible with the WORK.
- 3. If one Subcontractor is delaying another, the CONTRACTOR shall direct such changes as are necessary for those involved to mutually agree on the Construction Schedule changes in the best interest of construction progress.
- 4. Agenda
 - a. Review of construction progress since previous meeting
 - b. Field observations, interface requirements, conflicts
 - c. Issues which may impede the Construction Schedule
 - d. Off-site fabrication
 - e. Delivery schedules
 - f. Submittal schedules and status
 - g. Site utilization
 - h. Temporary facilities and services

- i. Hours of Work
 - j. Hazards and risks
 - k. Housekeeping
 - l. Quality and Work standards
 - m. Change orders
 - n. Documentation of information for payment request
 - o. Corrective measures and procedures to regain projected schedule, if necessary
 - p. Revisions to the Construction Schedule
 - q. Progress and schedule during the succeeding WORK period
 - r. Review proposed changes for:
 - i. Effect on the Construction Schedule and on the Completion Date
 - ii. Effect on the other contracts of the Project
 - s. Status of Pollution Prevention Measures
 - t. Other business
- 5. Location of Meetings: DISTRICT's Field Office
 - 6. Reporting: After each meeting, minutes of the meeting will be distributed by the DISTRICT to each party present and to parties who should have been present.
- C. Special Reports:
- 1. When an event of an unusual and/or significant nature occurs at the Site, a special report shall be prepared and submitted by the CONTRACTOR to the DISTRICT. List the chain of events, persons participating, the response by CONTRACTOR's personnel, an evaluation of the results or effects, and similar pertinent information.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01300 SUBMITTALS

PART 1 - GENERAL

1.01 SCOPE:

- A. This SECTION includes definitions, descriptions, transmittal, and review of "Compliance" and "Miscellaneous" Submittals.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01310 – COST LOADED CONSTRUCTION SCHEDULE

1.02 GENERAL INFORMATION:

- A. Definitions:
 - 1. Compliance Submittals include Shop Drawings, product data, and samples which are prepared by the CONTRACTOR, Subcontractor, MANUFACTURER, or Supplier and submitted by the CONTRACTOR to the DISTRICT as a basis for approval of the use of Equipment and Materials proposed for incorporation in the WORK or needed to describe installation, operation, maintenance, or technical properties.
 - a. Shop Drawings include custom-prepared data of all types including drawings, diagrams, performance curves, material schedules, templates, instructions, and similar information not in standard printed form applicable to other projects.
 - b. Product data includes standard printed information on materials, products and systems not custom-prepared for this Project, other than the designation of selections from available choices.
 - c. Samples include both fabricated and unfabricated physical examples of materials, products, and WORK; both as complete units and as smaller portions of units of WORK; either for limited visual inspection or (where indicated) for more detailed testing and analysis. Mock-ups are a special form of samples which are too large to be handled in the specified manner for transmittal of sample Submittals.
 - 2. Miscellaneous Submittals are those technical reports, administrative Submittals, certificates, and guarantees not defined as Shop Drawings, product data, or samples.
 - a. Technical reports include laboratory reports, tests, technical procedures, technical records, CONTRACTOR's design analysis and CONTRACTOR's survey field notes for construction staking, before cross-sections and after cross-sections.
 - b. Administrative Submittals are those nontechnical Submittals required by the Contract Documents or deemed necessary for administrative records. These Submittals include maintenance agreements, workmanship bonds, Project photographs, physical work records, statements of applicability, copies of industry standards, as-constructed data, security/protection/safety data, and similar type Submittals.
 - c. Certificates and guarantees are those Submittals on Equipment and Materials where a written certificate or guarantee from the MANUFACTURER or Supplier is called for in the Specifications.
 - d. Reports as required by Contract describing CONTRACTOR's means and methods for items such as dewatering, earth and water retaining, erosion/turbidity control, and safety plans.
 - 3. Refer to ARTICLE 1.03 and 1.04 of this Part for detailed lists of documents and specific requirements.
- B. Quality Requirements:

1. CONTRACTOR shall number submittals according to the representative specification Section. Use successive extension numbers for each submittal from that section. For example a Pumping and Piping submittal related to Section 15030, shall be numbered 15030 -001, the next submittal shall be numbered 15030-002, and so forth. When referring to a specification or standard from an organization such as FDOT, use that organizations specification, standard number, callout, etc., as part of the submittal numbering.
 2. Submittals such as Shop Drawings and product data shall be of the quality for legibility and reproduction purposes. Every line, character, and letter shall be clearly legible. Drawings such as reproducibles shall be useable for further reproduction to yield legible hard copy.
 3. Documents submitted to the DISTRICT that do not conform to these requirements shall be subject to rejection by the DISTRICT, and upon request by DISTRICT, CONTRACTOR shall resubmit conforming documents. If conforming Submittals cannot be obtained, such documents shall be retraced, redrawn, or photographically restored as may be necessary to meet such requirements. CONTRACTOR's (or his Subcontractor's) failure to initially satisfy the legibility quality requirements will not relieve CONTRACTOR (or his Subcontractors) from meeting the required schedule for Submittal of Shop Drawings and product data.
- C. Language and Dimensions:
1. All words and dimensional units shall be in the English language.
 2. Metric dimensional unit equivalents may be stated in addition to the English units.
- D. Submittal Completeness:
1. Submittals shall be complete with respect to dimensions, design criteria, materials of construction, and other information specified to enable the DISTRICT to review the information effectively.
 2. Where standard drawings are furnished which cover a number of variations of the general class of equipment, each such drawing shall be individually annotated to describe exactly which parts of the drawing apply to the equipment being furnished. Use hatch marks to indicate variations that do not apply to the Submittal. The use of "highlighting markers" is not an acceptable means of annotating Submittals. Such annotation shall also include proper identification of the Submittal permanently attached to the drawing.
 3. CONTRACTOR Stamp of compliance:
 - a. The CONTRACTOR shall provide a Review Compliance stamp. Submittals shall be stamped on the first sheet of the actual submittal (not the transmittal) to indicate the CONTRACTOR has reviewed and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and has coordinated each Compliance Submittal with the requirements of the WORK and the Contract Documents. By using this stamp, the CONTRACTOR agrees he has conformed to those requirements.
 4. Reproduction or copies of Drawings or portions thereof will not be accepted as complete fabrication or erection drawings. The CONTRACTOR may use a reproduction of the DISTRICT-prepared Contract Drawings for erection drawings such as to indicate information on erection or to identify detail drawing references. Where the Drawings are revised to show this additional CONTRACTOR information, the DISTRICT's title block shall be replaced with a CONTRACTOR's title block and the DISTRICT's professional seal shall be removed from the Drawing. The CONTRACTOR shall revise these erection drawings for subsequent DISTRICT revisions to the Contract Drawings.

1.03 COMPLIANCE SUBMITTALS:

- A. Items shall include, but not be limited to, the following:
1. MANUFACTURER's specifications
 2. Catalogs, or parts thereof, of manufactured equipment

3. Shop fabrication and erection drawings
4. Temporary Support Systems, shoring, coffer dams, formwork, wall and floor bracing, etc.
5. General outline drawings of equipment showing overall dimensions, location of major components, weights, and location of required building openings and floor plates
6. Detailed equipment installation drawings, showing foundation details, anchor bolt sizes and locations, baseplate sizes, location of DISTRICT's connections, and all clearances required for erection, operation, and disassembly for maintenance.
7. Schematic diagrams for electrical items, showing external connections, terminal block numbers, internal wiring diagrams, and one-line diagrams
8. Bills of material and spare parts list
9. Instruction books and operating manuals
10. Material lists or schedules
11. Performance tests on equipment by MANUFACTURERS
12. Concrete mix design information
13. Samples and color charts
14. All drawings, calculations, catalogs or parts thereof, MANUFACTURER's specifications and data, samples, instructions, and other information specified or necessary:
 - a. For DISTRICT to determine that the Equipment and Materials conform with the design concept and comply with the intent of the Contract Documents.
 - b. For the proper erection, installation, operation and maintenance of the Equipment and Materials which the DISTRICT will review for general content but not for substance.
 - c. For the DISTRICT to determine what supports, anchorages, structural details, connections, and services are required for the Equipment and Materials, and the effects on contiguous or related structures and Equipment and Materials.

B. Compliance Submittal Action Stamps:

1. The DISTRICT's review action stamp or designation, appropriately completed, will appear on all Compliance Submittals of CONTRACTOR when returned by the DISTRICT. Review status designations listed on DISTRICT's action stamp are defined as follows:
 - a. "ACCEPTED AS SUBMITTED": Signifies Equipment or Material represented by the Submittal conforms with the design concept and complies with the intent of the Contract Documents and is acceptable for incorporation in the WORK. CONTRACTOR is to proceed with fabrication or procurement of the items and with related WORK.
 - b. "ACCEPTED AS NOTED": Signifies Equipment and Material represented by the Submittal conforms with the design concept and complies with the intent of the Contract Documents and is acceptable for incorporation in the WORK subject to the condition that as constructed it shall be in accordance with all notations and/or corrections indicated. CONTRACTOR is to proceed with fabrication or procurement of the items and with related WORK in accordance with DISTRICT's notations.
 - c. "RETURNED FOR REVISION": Means that deviations from the requirements of the Contract Documents exist in the Submittal. CONTRACTOR is to resubmit revised information responsive to DISTRICT's annotations on the returned Submittal or written in the letter of transmittal. Fabrication or procurement of items represented by the Submittal and related WORK is not to proceed until the Submittal is approved.
 - d. "NOT ACCEPTABLE (SUBMIT A NEW)": Signifies Equipment and Material represented by the Submittal does not conform with the design concept or comply with the intent of the

Contract Documents and is disapproved for use in the WORK. CONTRACTOR is to resubmit Compliance Submittals responsive to the Contract Documents.

- e. "PRELIMINARY SUBMITTAL": Signifies Submittals of such preliminary nature that a determination of conformance with the design concept or compliance with the intent of the Contract Documents must be deferred until additional information is furnished. CONTRACTOR is to submit such additional information to permit layout and related activities to proceed.
- f. "FOR REFERENCE ONLY": Signifies Submittals which are for supplementary information only; pamphlets, general information sheets, catalog cuts, standard sheets, bulletins and similar data, all of which are useful to the DISTRICT in design, operation, or maintenance, but which by their nature do not constitute a basis for determining that items represented thereby conform with the design concept or comply with the intent of the Contract Documents. The DISTRICT reviews such Submittals for general content but not for substance.
- g. "DISTRIBUTION COPY (PREVIOUSLY ACCEPTED)": Signifies Submittals which have been previously accepted and are being distributed to CONTRACTOR, DISTRICT, Resident Project Representative, and others for coordination and construction purposes.

C. Schedule and Log of Compliance Submittals:

- 1. Prepare for the DISTRICT, a schedule and log for submission of all Compliance Submittals specified or necessary for DISTRICT's review of the use of Equipment and Materials proposed for incorporation in the WORK or needed for proper installation, operation or maintenance. Submit the schedule and log with the procurement schedule and WORK progress schedule. Schedule submission of all Compliance Submittals to permit review, fabrication, and delivery in time so as to not cause a delay in the WORK of CONTRACTOR or his Subcontractors or any other contractors as described herein.
- 2. In establishing schedule for Compliance Submittals, allow fifteen (15) working days in DISTRICT's office for reviewing original Submittals and ten (10) working days for reviewing resubmittals.
- 3. The schedule shall indicate the anticipated dates of original submission, and shall be prepared in accordance with SECTION 01310.
- 4. Schedule all Compliance Submittals required prior to fabrication or manufacture for submission within 30 days of the Notice to Proceed. Schedule Compliance Submittals pertaining to storage, installation and operation at the Site for DISTRICT's acceptance prior to delivery of the Equipment and Materials.
- 5. Resubmit Compliance Submittals the number of times required for DISTRICT's "ACCEPTED AS SUBMITTED." However, any need for resubmittals in excess of the number set forth in the accepted schedule, or any other delay in obtaining acceptance of Submittals, will not be grounds for extension of the Contract Time, provided the DISTRICT completes its reviews within the times stated above.

D. Transmittal of Compliance Submittals:

- 1. All Compliance Submittals of Equipment and Materials furnished by Subcontractors, MANUFACTURERS, and Suppliers shall be submitted to the DISTRICT by CONTRACTOR in electronic and hard copy format as indicated below.
- 2. After checking and verifying all field measurements, transmit all Compliance Submittals to the DISTRICT for acceptance as follows:
 - a. Identify each Compliance Submittal by Submittal Number, Project name and number, Contract title and number, and the Specification SECTION and article number marked thereon or in the letter of transmittal. Unidentifiable Submittals will be returned for proper identification.
 - b. Check and stamp Compliance Submittals of Subcontractors, Suppliers, and MANUFACTURERS with CONTRACTOR's approval prior to transmitting them to the

DISTRICT. CONTRACTOR's stamp of approval shall constitute a representation to the DISTRICT that CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or he assumes full responsibility for doing so, and that he has coordinated each Compliance Submittal with the requirements of the WORK and the Contract Documents.

- c. At the time of each submission, call to the attention of DISTRICT in the letter of transmittal any deviations from the requirements of the Contract Documents.
 - d. Provide all Submittals in electronic format, compatible with Adobe Professional, Version 8 (or higher), and submitted as a single file, using PDF bookmarks and/or chapters to identify divisions within the Submittal package.
 - e. In addition to the electronic copy, the CONTRACTOR shall provide one (1) hard copy for each Submittal. Both the electronic and the hard copy Submittals shall include the required transmittal sheet and written confirmation by the CONTRACTOR that the electronic Submittal is complete and identical to the submitted hard copy. Note that the Submittal receipt date will be the date that the hard copy is received by the DISTRICT.
 - f. Submittals with file sizes greater than ten (10) megabyte (MB) shall be transferred to an existing DISTRICT File Transfer Protocol (FTP) site, coupled with an electronic notification to the DISTRICT of the transfer. One (1) hard copy of the Submittal shall be provided by the CONTRACTOR. The Submittal receipt date will be the date that the hard copy is received by the DISTRICT. The FTP address, and associated password information, will be provided by the DISTRICT Project Manager.
 - g. Make all modifications noted or indicated by DISTRICT and return revised prints, copies, or samples until accepted. Revised Submittals must be complete and conformed, including all pages/sheets with the required revisions and any additional or replacement pages/sheets. Direct specific attention in writing, or on revised Submittals, to changes other than the modifications called for by the DISTRICT on previous Submittals. Subsequent review cycles for returned or revised Submittals shall replicate the process described in items d. through f. above.
 - h. If the DISTRICT's review action is "ACCEPTED AS NOTED", the Submittal will be stamped as such, and electronically transmitted back to the CONTRACTOR. Upon receipt of this notification from the DISTRICT, The CONTRACTOR shall resubmit one (1) conformed hard copy with an electronic PDF file format to the DISTRICT for final distribution. If the Submittal is required to be signed and sealed by a Professional Engineer registered in the State of Florida, it shall be signed and sealed at this time. Submittal will not be considered final until all copies have been received by the DISTRICT. Submittal will be stamped "DISTRIBUTION COPY (PREVIOUSLY ACCEPTED)" by the DISTRICT. Prints of accepted Submittals transmitted for final distribution will not be further reviewed and are not to be revised. If errors are discovered during manufacture or fabrication, correct the Submittal and resubmit for review.
 - i. Following completion of the WORK and prior to final payment, furnish those drawings necessary to indicate "AS CONSTRUCTED" conditions, including field modifications, in the number of copies specified. Furnish additional copies for insertion in equipment instruction books as required. All such copies shall be clearly marked "AS BUILT DRAWING."
 - j. WORK requiring a Compliance Submittal shall not be commenced or shipped until the Submittal has been stamped "ACCEPTED AS SUBMITTED" or "ACCEPTED AS NOTED" by the DISTRICT.
 - k. Keep a copy or sample of each Compliance Submittal in good order at the Site.
3. Copies of the equipment CONTRACTOR's erection drawings and other Compliance Submittals required for the installation of equipment furnished by others under separate Contract for installation under this Contract will be transmitted to CONTRACTOR by the DISTRICT in the final distribution of such Submittals.

4. Information to MANUFACTURER's District Office: MANUFACTURERS and Suppliers of Equipment and Materials shall furnish copies of all agreements, drawings, specifications, operating instructions, correspondence, and other matters associated with this Contract to the MANUFACTURER's district office servicing the DISTRICT. Insofar as practicable, all business matters relative to Equipment and Materials included in this Contract shall be conducted through such local district offices.
- E. DISTRICT's Review:
1. The DISTRICT will review and return Compliance Submittals to CONTRACTOR with appropriate notations. Instruction books and similar Submittals will be reviewed by the DISTRICT for general content but not for substance.
 2. The DISTRICT's acceptance of Compliance Submittals will not relieve CONTRACTOR from his responsibility as stated in the Section 00700 – General Terms and Conditions.
- F. Instruction Books / Operation & Maintenance Manuals:
1. Equipment instruction books and manuals shall be prepared by the MANUFACTURER and shall include the following:
 - a. Index and tabs
 - b. Instructions for installation, start-up, operation, inspection, maintenance, parts lists and recommended spare parts, and data sheets showing model numbers
 - c. Applicable drawings
 - d. Name of contact person, phone number, and address of the nearest authorized service facility
 - e. Attached to the above shall be a notice of the exact warranty effective dates, beginning and ending.
 - f. All additional data specified
 2. Information listed above shall be submitted electronically in a PDF file format and also be bound into hard-back binders of three-ring type. Sheet size shall be 8-1/2 inches x 11 inches. Binder color shall be yellow for Electrical and Electronics and brown for Miscellaneous Equipment. Capacity shall be a minimum of 1-1/2 inches, but sufficient to contain and utilize sheets with ease.
 - a. Instruction Books/Operation & Maintenance Manuals shall contain the following:
 - i. Equipment name
 - ii. MANUFACTURER's name
 - iii. Project name
 - iv. Contract number
 - v. Reference to applicable Drawing No. & Technical Specifications Section
 - b. Format: The overall manual should be constructed around certain types of structures or equipment in the Project, and not merely assembled by technical specification section, so that all pertinent data needed by personnel to operate or maintain the equipment or structure is in one (1) manual (as far as is practical). The CONTRACTOR shall coordinate with the DISTRICT as to how the manuals are to be assembled.
- G. Samples:
1. Office samples shall be of sufficient size and quantity to clearly illustrate the following:
 - a. Functional characteristics of the product, with integrally related parts and attachment devices
 - b. Full range of color, texture, and pattern
 - c. Bulk samples for material testing sufficient quantity to perform applicable tests.

2. Should any testing of sample require an expedited review, CONTRACTOR shall arrange and pay for associated cost to transport any samples to the DISTRICT lab or approved vendor site for review and testing.

H. Daily Reports:

1. Prepare and provide Daily Reports to include the following information:
 - a. Author
 - b. Date
 - c. Weather Conditions
 - d. Work being performed
 - e. Subcontractors that are on site and working
 - f. Visitors/contacts made
 - g. Instructions given/received
 - h. Problems identified
 - i. Safety issues

1.04 MISCELLANEOUS SUBMITTALS:

- A. Miscellaneous Submittals are comprised of technical reports, administrative Submittals, and guarantees which relate to the WORK, but do not require DISTRICT's approval prior to proceeding with the WORK. Miscellaneous Submittals may include but are not limited to (at DISTRICT's discretion):
 1. Welder qualification tests
 2. Welding procedure qualification tests
 3. X-ray and radiographic reports
 4. Field test reports
 5. Concrete cylinder test reports
 6. Certification on Materials:
 - a. Steel mill tests
 - b. Paint lab tests
 - c. Cement tests
 7. Soil test reports
 8. Temperature records
 9. Shipping or packing lists
 10. Job progress schedules
 11. Equipment and Material delivery schedules
 12. Progress photographs
 13. Warranties and guarantees
 14. Fire protection and hydraulic calculations
 15. Surveying field notes, preliminary and final Surveyor's Reports
 16. Pump tests
 17. Traffic control plan

18. Technical Reports
19. Written Certificates and Guarantees
20. Weather Reports
21. Safety Compliance Reports

B. Transmittal of Miscellaneous Submittals:

1. All Miscellaneous Submittals furnished by Subcontractors, MANUFACTURERS, and Suppliers shall be submitted to DISTRICT by CONTRACTOR in the form of one (1) hard copy with an electronic PDF file format, unless otherwise specified.
 - a. Identify each miscellaneous Submittal by Project name and number, Contract title and number, and the specification section and article number marked thereon or in the letter of transmittal. Unidentifiable Submittals will be returned for proper identification.
 - b. Check and stamp Miscellaneous Submittals of Subcontractors, Suppliers, and MANUFACTURERS with CONTRACTOR's approval prior to transmitting them to the DISTRICT. CONTRACTOR's stamp of approval shall constitute a representation to the DISTRICT that CONTRACTOR has either determined and verified all information, or he assumes full responsibility for doing so, and that he has coordinated Miscellaneous Submittal with the requirements of the WORK and the Contract Documents.
 - c. At the time of each submission, call to the attention of the DISTRICT in the letter of transmittal any deviations from the requirements of the Contract Documents.
 - d. Make all modifications noted or indicated by DISTRICT and return revised prints, or copies until accepted. Direct specific attention in writing, or on revised Submittals, to changes other than the modifications called for by the DISTRICT on previous Submittals. After Submittals have been accepted, submit copies thereof for final distribution.
2. Test Reports:
 - a. Responsibilities of CONTRACTOR and DISTRICT regarding tests and inspections of Equipment and Materials and completed WORK are set forth elsewhere in these Contract Documents.
 - b. The party specified responsible for testing or inspection shall in each case, unless otherwise specified, arrange for the testing laboratory or reporting agency to distribute test reports in the form of ten (10) hard copies with an electronic PDF file format to the the DISTRICT.

C. DISTRICT'S Review:

1. DISTRICT will review Miscellaneous Submittals for indications of WORK or material deficiencies within fifteen (15) working days in DISTRICT's office for original Submittals and ten (10) working days for reviewing resubmittals.
2. DISTRICT will respond to CONTRACTOR on those Miscellaneous Submittals which indicate WORK or material deficiency.

PART 2 - PRODUCTS (Not applicable)

PART 3 -EXECUTION

3.01 SUBMITTAL LIST:

- A. The CONTRACTOR shall review the specifications submitted and deliver a submittal list and coordinate with its subcontractors and Suppliers. The CONTRACTOR shall submit this list within fifteen (15) days of NTP. This List shall include all of the Compliance Submittals specified in the Compliance Submittal Log.

3.02 SUBMITTAL LOG:

- A. CONTRACTOR shall maintain an accurate Submittal Log and a Distribution List for the duration of the WORK, showing current status of all Submittals and Distributees at all times in a form acceptable to the DISTRICT. CONTRACTOR shall make the Submittal Log available to the DISTRICT for its review on request, and shall bring a copy of the Submittal Log to all Progress Meetings.

3.03 COMPLIANCE SUBMITTAL SCHEDULE

- A. CONTRACTOR shall maintain an accurate Compliance Submittal Schedule for the duration of the WORK showing the current schedule of all Submittals including reviews. CONTRACTOR shall make the Compliance Submittal Schedule available to the DISTRICT both in electronic and hard copy format for its review on request, and shall bring a copy of the Compliance Submittal Schedule to all Progress Meetings.

END OF SECTION

SECTION 01310 COST LOADED CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 SCOPE:

- A. COST LOADED CONSTRUCTION SCHEDULE (Construction Schedule): The WORK under this Contract shall be planned, scheduled, executed, and reported by the CONTRACTOR. The CONTRACTOR shall adhere to established technical standards for CPM (Critical Path Method) scheduling using the computerized PDM (Precedence Diagram Method), unless otherwise directed by the DISTRICT. The CONTRACTOR is required to provide all Construction Schedules in electronic format.
- B. The CONTRACTOR shall submit a detailed Cost Loaded Construction Baseline Schedule (Baseline Schedule) showing all WORK required under the Contract and scheduled within the time constraints set forth under the Contract. The DISTRICT will review and comment on the Baseline Schedule submittal as per 2.03. Upon acceptance, the CONTRACTOR shall not change the accepted Baseline Schedule without prior concurrence of the DISTRICT. The Baseline Schedule shall be updated to show actual progress. Any proposed changes in the schedule activities, original duration, logic, activity constraints, other than progress, shall be incorporated into a request for a revision to the accepted Baseline Schedule and submitted for review and acceptance.
- C. The CONTRACTOR shall be responsible for coordinating its own schedules (including subcontractors) as well as the construction activities of others as required to fully execute the WORK.

1.02 SOFTWARE/INTERFACE REQUIREMENTS:

- A. The CONTRACTOR shall use the latest version of Oracle/Primavera P6 Professional Project Management (P6) for creating and updating all Construction Schedules and reports. No other scheduling software programs will be accepted.
- B. To ensure compatibility for DISTRICT asset accounting, the DISTRICT will provide Activity Codes (for all Asset and Non-asset Activities), and assist the CONTRACTOR in developing a Work Breakdown Structure (WBS) to be entered into the scheduling software as referenced in Section 2.02. The Construction Schedule (i.e. the accepted Baseline Schedule and all Schedule Updates) shall be used as the basis for payment.

1.03 QUALITY ASSURANCE:

- A. The CONTRACTOR shall perform the WORK covered by this SECTION with personnel having substantial experience in the use of the latest version of P6 scheduling software on construction projects which required the development and maintenance of the schedule throughout the Project duration.
- B. It is the responsibility of the CONTRACTOR to work with each subcontractor and supplier to obtain information pertinent to the planning and updating of their respective activities in the schedules.

1.04 DEALING WITH SUBSTITUTES:

- A. All versions of the CONTRACTOR's Construction Schedule shall be based solely on the WORK as awarded, and shall exclude any substitute proposals, even if the CONTRACTOR pursues a substitution in accordance with the provisions of the Contract.
- B. The DISTRICT's final determination on any proposed substitutions may not be made until after the CONTRACTOR's Construction Schedule is prepared and accepted. Accepted proposed substitutions shall be identified in the schedule as Change Orders.

1.05 USE OF FLOAT:

- A. Total Float is the amount of time a scheduled activity can be delayed without delaying the completion of the WORK beyond the contractually required end date. Contract Float is the number of days between the CONTRACTOR's anticipated date for early completion of the WORK, or specified part, and the corresponding Contract Time. Total Float and Contract Float belong to the Project and are not for the exclusive benefit of any party. Contract Float and Total Float shall be available to the DISTRICT, consultants, or the CONTRACTOR to accommodate changes in the WORK or to mitigate the effect of events which may delay performance or completion. The DISTRICT will monitor and optimize the use of float for the benefit of the Project.
- B. The CONTRACTOR shall adjust or remove any float suppression techniques (e.g., preferential sequencing, out-of-sequence activity relationships, crew movements, equipment use, form reuse, extended durations, imposed dates, etc.) as a prerequisite to a request for an increase in Contract Price and/or Contract Time. Use of constraints should be minimized and require approval by the DISTRICT.

1.06 EARLY COMPLETION:

- A. An early completion schedule is one which anticipates completion of all or a specified part of the WORK ahead of the corresponding Contract Time. Since Contract and Total Floats belong to the Project, the CONTRACTOR shall not be entitled to any extension in Contract Time or recovery for any delay incurred because of extensions in an early completion date until all Contract Float is used or consumed and performance or completion of the WORK extends beyond the Contract Time. The accepted Baseline Schedule must have a single longest path with zero Total Float. Multiple longest paths are not acceptable.

1.07 NON-COMPLIANCE:

- A. The DISTRICT may refuse to recommend/authorize a progress payment in the event of the CONTRACTOR's failure, refusal or neglect to provide the required schedule information, since this will preclude the proper evaluation of the CONTRACTOR's progress. Remedies for the CONTRACTOR's failure, neglect or refusal to comply with the requirements of this SECTION are in addition, and not limited to, those provided under other sections of the Contract.

PART 2 - PRODUCTS

2.01 GENERAL CRITERIA:

- A. All Construction Schedules shall be prepared by the CONTRACTOR and reflect the CONTRACTOR's plans, means and methods, techniques and sequences for performing of the WORK.
- B. The Construction Schedules shall break down the WORK into distinct activities with interdependencies to the extent required to clearly depict the planned approach for completion of the WORK and to effectively manage the execution of the WORK.
 - 1. The Construction Schedules shall divide the WORK into manageable and logical segments and specify the progression from the Notice to Proceed (NTP) to Substantial Completion (SC) to Final Completion (FC) within Contract Time.
 - 2. The Construction Schedule is to include, at minimum, appropriate time allowances for submittals, procurement, coordination with others, construction, start-up/check-out (if applicable), operational and performance testing (if applicable), commissioning (if applicable), and Contract Close-Out.
 - 3. Site-related activities shall not reflect a combination of work located in separate structures, work corresponding to different divisions of the specifications, work performed by first and second tier subcontractors or rough-in and finish work of the same trade.
 - 4. The NTP activity shall be the first activity in the schedule and shall be a Start Milestone, with an assigned 7-day, no holiday calendar. The SC and FC activities shall be Finish Milestones, with assigned "Finish on or Before" constraints, with the Contract SC and FC dates assigned to the constraints, with a 7-day, no holiday calendar.

5. Primavera Settings:
 - a. Constraints – Mandatory Starts or Finishes, Start on or Finish on and Late as Possible constraints cannot be used in the Construction Schedules.
 - b. Calculation Settings – Default settings must be used, except that Critical activities must be defined as Longest Path activities.
 - c. Activity Types – Resource Dependent & WBS Summary activity types cannot be used except as directed by the DISTRICT. Most activity types will be set to Task Dependent.
 - d. Percent (%) Complete Type must be set to Duration.
 - e. Duration Type must be set to Fixed Duration & Units.
 - f. There must not be any Curve applied to an activity if the Status % Complete method is going to be used to calculate the actual cost.
 6. The CONTRACTOR's Construction Schedule shall include preparation, review and acceptance of Shop Drawings, material fabrication and material deliveries. The first submittal review and acceptance activity durations shall be fifteen (15) working days. Resubmittal review and acceptance cycles shall have activity durations of ten (10) working days. The CONTRACTOR shall include only the first submittal review and acceptance cycle for each submittal in the Construction schedule. If more than one cycle for a submittal occurs, the CONTRACTOR shall add that cycle to the schedule at the time it occurs. Additional submittal, review and acceptance cycles will require a revision to the Baseline Schedule.
- C. The schedule shall incorporate all contractual milestones dates, NTP, Substantial completion, and Final completion dates a timescale calendar, and expressly identify Contract Time, milestones, critical path(s), and all activities. Activities shall display early dates and total float. Connections between activities, whether on the same sheet or on different sheets, shall identify both predecessor and successor work. Activity data shall include a description of the Work, activity costs, activity duration, and special codes. The use of start or finish restraint dates must be approved by the DISTRICT. The following minimum information shall be incorporated into the schedule:
1. Activity ID
 2. Subcontractor ID Code
 3. Activity Description
 4. Original Duration
 5. Remaining Duration
 6. % Complete
 7. Early Start
 8. Early Finish
 9. Late Start
 10. Late Finish
 11. Total Float
 12. BL- Target Early Start
 13. BL- Target Late Finish
 14. Budgeted Cost
 15. Cost to date
 16. Cost to Complete
- D. Prepare Schedules with separate activity bar for each significant or major portion of Work or construction activity. Within each time bar, indicate estimated completion percentage in 10% increments. Schedule Activities shall at a minimum include descriptions (and assigned durations) of each specification section from all Divisions within the Contract Documents. For Division 1 sections, include those sections associated with permits, submittals, facility set up, testing, operation and maintenance, close out and similar work related activities. Adhere to activity duration of 30 days or less requirement.

- E. Follow the Table of Contents of these Contract Documents (Division 1 – All Divisions) as the format for listing component items.
- F. The schedule shall show the Work broken down into the Work Sites and major phases/ key items with the date Work is expected to begin and be completed. Sequence of listings shall be in the chronological order of the start of each item of Work. Each work Activity shall show the Quantity of Work to be performed, Duration of Activity, and Daily Rate of Production Required.
- G. For Phasing: Provide notations on the schedule to show how the sequence of the Work is affected by the following:
 - 1. Requirements for phase completion.
 - 2. Work by separate contractors.
 - 3. Coordination with existing construction.
 - 4. Portions of work requiring inspections, tests, and start up acceptance.
 - 5. Uninterruptible services.
 - 6. Site restrictions.
 - 7. Provisions for future construction.
 - 8. Seasonal variations.
 - 9. Environmental control.
 - 10. Substantial completion of milestones.
- H. The CONTRACTOR shall schedule any requirements (such as submittal reviews) of the DISTRICT, the DESIGN CONSULTANT and others (performing WORK for the DISTRICT) indicated in, or required by the Contract Documents. The Construction Schedule shall incorporate appropriate activities and WORK sequences based upon the Contract Documents.

2.02 PROCUREMENT SCHEDULE

- A. The Procurement schedule shall be integrated into the Baseline Schedule, along with the submittal of preliminary schedule as stated above, integrate a detailed schedule for procurement of equipment and materials to be furnished by CONTRACTOR, subcontractors, manufacturers, and suppliers. Do not include minor items which are known to be regularly stocked by local suppliers or readily available upon short notice. Submit to DISTRICT for acceptance with the Construction progress schedule.
- B. DISTRICT will review and comment on the schedule for procurement, and upon agreement with CONTRACTOR concerning any necessary revisions, the schedule will be accepted.
- C. The Procurement schedule shall coincide with the construction progress schedule and shall indicate the date each item will be needed at the site, the time required for delivery after order is placed, and whether or not Submittals are required.
- D. Update the accepted schedule for procurement at least once each month to show the status of orders placed, Submittals, and delivery and submit with the construction progress report.
- E. If requested by DISTRICT, provide copies of any purchase order placed by CONTRACTOR or Subcontractors.

2.03 RESOURCE AND COST LOADING:

- A. Each activity in the Contract Schedules shall be assigned a dollar value in accordance with the physical value of that work in relationship to the Schedule of Values. The total budget value of all activities shall equal the Contract Price as broken down by the Schedule of Values. The CONTRACTOR shall also indicate the estimated duration for each construction activity and material quantities for all activities that are shown in the Schedule of Values. A partial list is included in Section 01020 paragraph BASIS FOR PAYMENT.
- B. Schedules not containing such breakdown will not be accepted.

- C. Any cost-loaded activity must use Units Percent (%) Complete for measuring and establishing the completion of the activity. Provide payout curve using scheduling software program. Update for each months schedule update.
- D. The WBS for the logical construction sequencing, at a minimum shall consist of the following:
 - 1. General (e.g., NTP, SC, FC, General Conditions, Bonds & Insurance, Punchlist)
 - 2. Submittal Preparation
 - 3. Submittal Review and Acceptance – If there are engineering costs associated with a submittal, those costs must be approved by the DISTRICT before they can be cost loaded in the Construction Schedule. Once approved, a separate activity named “Submittal Accepted” with zero (0) days duration can be added with the cost loading applied. No payment will be made for submittals until the review and acceptance process has been completed for that submittal.
 - 4. Fabrication & Delivery - If there are costs associated with the Fabrication and Delivery, then a separate cost loaded Delivery Activity must be added with one (1) day duration, and assigned to its appropriate Activity Code/WBS. The DISTRICT will only pay for materials once delivered and stored in a manner that complies with all the Contract Documents.
 - 5. The WBS for the remaining construction related work shall be broken down in sufficient detail for conveying the sequence at which the CONTRACTOR intends to construct the Project.
- E. Schedules where activities are not assigned both an Activity Code and WBS will not be accepted.
- F. Cost Resource Loading:
 - 1. A single unique resource for the cost loading of all activities shall be created in the resource dictionary.
 - 2. The resource type for costs shall be “Nonlabor”.
 - 3. Cost loading of activities shall be lump sum loading of the Budgeted Cost field or Budgeted Units.
 - 4. Activity Costs shall be updated using the Actual Nonlabor Cost field or, if “Calculating Costs from Units”, change the Duration % Complete or Remaining Duration for each activity. The Duration % Complete must match the Cost % Complete or a specific reason must be given in the narrative for this discrepancy and the DISTRICT will determine if the discrepancy is acceptable.
 - 5. All costs must be displayed to two (2) decimal places.
 - 6. The Costs for Mobilization and Demobilization activities must be equal.
- G. Financial Periods and Stored Period Performance:
 - 1. The Financial Periods must be set for the duration of the Project and start on the first day of the month and finish on the last day of the month.
 - 2. “Stored Period Performance” must be used on a monthly basis in order for the “Actual This Period Nonlabor Cost” to be displayed correctly in the reports.
- H. Stored Material - For those Construction Schedule activities of WORK that will use Stored Materials, the material or equipment delivery activities related to the WORK will be cost loaded with enough money to cover the stored material. The cost loading of activities related to the work-in-place will be reduced by the amount of the stored material costs loaded into the delivery activities. The CONTRACTOR must provide a list of materials and/or equipment that will be paid for under Stored Materials prior to acceptance of the Baseline Schedule so that the DISTRICT can check for proper cost loading.
- I. If the WORK includes items covered by allowances, the CONTRACTOR shall ensure that WORK is completed within the limits of the Contract Time. The Construction Schedule shall incorporate the CONTRACTOR’s best estimate of the activities and logic associated with the allowances.

2.04 COST LOADED CONSTRUCTION SCHEDULE SUBMITTAL:

- A. The Construction Schedule submittal, which refers to both the Baseline Schedule and all Schedule Updates, are to consist of the following items:
 - 1. An electronic file containing PDF formats of all required reports and graphics, including a written narrative.
 - 2. An electronic backup of the Construction Schedule in Primavera P6 XER format.
 - 3. For Schedule Updates, a copy of the payment application is required. The Period Ending date in the DISTRICT Application for Payment must match the Data Date of the corresponding Schedule Update.
- B. The Schedule Narrative Report for the Construction Schedule shall consist of a written description of how the WORK will be accomplished in accordance with the planned Construction Schedule. The Schedule Narrative accompanying each Schedule Update shall, at a minimum, compare current progress and cost performance to the accepted baseline schedule for all milestones and activities, including longest path activities. If there are potential or actual delays, the narrative shall state the cause of the delay and impact to the Construction Schedule and define steps that have been taken or intend to be taken to mitigate delay impacts. The CONTRACTOR shall list any proposed changes in network activities and logic that will need to be incorporated into a revision to the Baseline Schedule. The narrative shall provide sufficient detail to allow the DISTRICT to verify the progress of the WORK, compare actual versus planned activities, and identify assumptions made in scheduling work, including Change Order work. The CONTRACTOR shall direct specific attention, in writing, to adjustments or corrections made, either in response to the DISTRICT's comments on the previous submittal or otherwise. A Schedule Narrative Report must be provided for all Baseline Schedules and Schedule Updates even if there are no detailed comments for each sub-heading.
 - 1. Schedule Narrative Report
 - a. The Schedule Narrative Report shall show the following sub-headings with detailed comments:
 - i. Progress, issues, delays, and claims
 - ii. Schedule changes, including out-of-sequence work
 - iii. Milestones
 - iv. Critical submittals and Procurement items
 - v. Response to DISTRICT Review comments from previous submittal on an item by item basis.
 - b. It shall be an electronic color PDF – 8 ½ x 11 portrait format file.
- C. Required Schedule Reports and Graphics - Bar Chart reports/P6 (plf) layouts will be provided by the DISTRICT and imported for use by the CONTRACTOR.
 - 1. Schedule/Leveling Report (Schedlog)
 - a. The report shall indicate software settings and calculations generated by Primavera software.
 - b. Shall be an electronic color PDF - 8 ½ x 11 portrait format file.
 - 2. WBS with Cash Flow Diagram (Grouped by WBS)
 - a. Bar Chart shall indicate all activities grouped by WBS and sorted by Early Start, Early Finish and Total Float.
 - b. Cash Flow Diagram shall be shown at the end of the Bar Chart, which shows budget and actual monthly bars, and cumulative curves.
 - c. Shall be an electronic color PDF - 11 x 17 landscape format file.
 - 3. Longest Path Bar Chart (No Grouping)
 - a. Bar Chart shall indicate all longest path activities without grouping and sorted by Early Start, Early Finish and Total Float.
 - b. Bar Chart shall be an electronic color PDF - 11 x 17 landscape format file.
 - 4. Pay App - Expanded (Grouped by Activity Codes)
 - a. Bar Chart shall indicate all activities grouped by Activity Codes and sorted by Activity ID.

- b. Bar Chart shall be an electronic color PDF - 11 x 17 landscape format file.
- 5. Pay App - Rollup (Grouped by Activity Codes)
 - a. Bar Chart shall indicate all activities grouped by Activity Codes rolled up per each major Activity Code. The application for payment line items must match this layout.
 - b. Bar Chart shall be an electronic color PDF - 11 x 17 landscape format file.
- 6. Earned Value Report
 - a. The report shall show Earned Value information comparison between the accepted Baseline and the Current Schedule Update.
 - b. The report shall be an electronic color PDF - 11 x 17 landscape format file.
- D. Draft Schedule Reports – The following reports are to be provided prior to the formal submission of the Schedule Update and application for payment for the purpose of agreeing upon the Duration % Complete and Cost % Complete of each activity.
 - 1. WBS with Cash Flow Diagram
 - 2. Pay App - Expanded
 - 3. Longest Path
- E. Prior to each Schedule Update submittal, the DISTRICT and the CONTRACTOR will agree upon the physical progress of the WORK (Duration % Complete of each activity), and the value (Cost % Complete) of the scheduled work in place. The Duration % Complete must match the Cost % Complete, or a specific reason must be given in the Schedule Narrative Report.
- F. All documents shall show the Project ID and Name. The DISTRICT's review shall not extend to the CONTRACTOR's means, methods, or techniques, the correctness of which shall remain the sole responsibility of the CONTRACTOR.
- G. All schedules shall be in accordance with the Contract Time requirements of the Contract. Neither the DISTRICT's review of the Construction Schedule, nor the DISTRICT's statement of "Accepted As Submitted", will relieve the CONTRACTOR from responsibility for complying with Contract Time requirements, adhering to those sequences of work indicated in or required by the Contract Documents, or from completing any omitted WORK within the Contract Time.
- H. Acceptance by the DISTRICT of the Baseline Schedule and Schedule Updates shall be a CONDITION PRECEDENT to the processing of Applications for Payment.

2.05 INITIAL AND REVISED COST LOADED CONSTRUCTION BASELINE SCHEDULE:

- A. The CONTRACTOR shall submit their Initial Cost Loaded Construction Baseline Schedule to the DISTRICT for review and acceptance following Contract Execution and prior to NTP. It will be reviewed for conformance to the requirements of the Contract Documents. If the schedule is not accepted and requires revisions, the CONTRACTOR will revise this Initial Construction Baseline Schedule and resubmit it for review and acceptance within ten (10) calendar days.
- B. Schedule Naming Structure: Once the Initial Construction Baseline Schedule is accepted, it becomes the CONTRACTOR's Baseline Schedule Revision 0 and is the basis for monitoring the CONTRACTOR's progress against milestones, Contract Time, and the evaluation and reconciliation of extensions in Contract Time. From then on, all activities, original durations, and their relationships may not be changed, added, or deleted without the prior approval of the DISTRICT. The CONTRACTOR's Baseline Schedule Revision 0 must be revised when it is no longer useful as a status and control mechanism as determined by the DISTRICT. All changes must be coordinated with and approved by the DISTRICT. Contract Time (including all contracted milestones) cannot be changed without a formal Change Order approved by the DISTRICT. When a revision to the Baseline Schedule is required, a new revised Baseline Schedule shall be submitted in accordance with change procedures, for review and acceptance by the DISTRICT. Revisions to the Baseline Schedule shall follow the naming sequence listed below: (commas ("," or ampersands ("&")) cannot be used in the naming structure because they are recognized as commands by Primavera).

Project Name – R0A-U0	1 st Submission of Baseline Schedule.
Project Name – R0B-U0	2 nd Submission of Baseline Schedule, which is accepted.
Project Name – R1A-U0	1 st Submission of Revision to the Accepted Baseline Schedule R0B-U0, which is accepted.
Project Name – R2A-U0	1 st Submission of revised Baseline Schedule R1A-U0, which is accepted.
Project Name – R3A-U0	1 st Submission of revised Baseline Schedule R2A-U0, which is accepted.

- C. Baseline Schedule revisions shall accurately reflect all approved Change Orders including the exact duration and cost. They will be reviewed for conformance to the requirements of the Contract Documents as amended by Change Orders.
- D. Upon execution of a Change Order, a new Activity Code for that Change Order must be created. All activities associated with that Change Order will be assigned to both the new Activity Code and their corresponding WBS. Both the Application for Payment and the layout report, Pay App - Rollup, will have a line item indicating the new Change Order.
- E. The cost loading must not be changed from any Baseline Schedule Activities as a result of an executed Change Order. Original duration and logic may be changed on the Baseline Schedule Activities but the dollars amounts can only be changed by adding a new Change Order activity. This is applicable for both additive and deductive Change Orders.
- F. If a particular Scope of Work (SOW) has been deleted in a Change Order, the activity associated with that SOW must have the proper logic that causes both the new deductive Change Order Activity and the Baseline Schedule Activity to progress equally so the costs calculate correctly for that SOW.
- G. If a Baseline Schedule Activity becomes associated with a Change Order that affects its original duration or logic, then the Activity Name must include the Change Order. (e.g. ***CO#01***).
- H. If a new activity is added because of an executed Change Order both the Activity ID and the Activity Name must reflect the associated Change Order. (e.g. CO#01-A2500, Additional Silt Fence ***CO#01***).
- I. Baseline Schedule Activity ID's must not be changed or deleted.
- J. An executed Change Order may require multiple activities broken down in sufficient detail to convey the new SOW.

2.06 COST LOADED CONSTRUCTION SCHEDULE UPDATES:

- A. A Schedule Update is a copy of the accepted Baseline Schedule with progress added. Progress is Duration % Complete.
- B. Progress Schedule Update shall be submitted by the CONTRACTOR each month based upon the current accepted Baseline Construction Contract Schedule. Should an activity fall behind schedule by more than five (5) days a recovery plan shall be submitted and the schedule updated on a weekly basis until recovery is achieved. The recovery plan shall also include a narrative describing the revised work approach (i.e. additional equipment, crews, work days, etc.), indicate how the CONTRACTOR intends to complete the remaining Work within Contract Time, and indicate when schedule will become "non critical" again. Each schedule monthly update shall include the required BL schedule elements, including Early Start, Early Finish, and progress bars for Target and Actual progression for each Work activity.
- C. The Percentage of Completion times for the completed value of each work item will support the CONTRACTOR'S pay request and must be submitted attached to each pay request. The Schedule Update Submittal will be in the form explained above.
- D. All out of sequence activities that originally had a finish to start relationship, but became a Start to Start or Finish to Finish relationship must be corrected in the Schedule Update. For other out of sequence relationships, a revision to the baseline is required.

- E. Each Schedule Update shall be named beginning with the Accepted Baseline Number followed by the Update number beginning with "1A" as follows:

Project Name – R0B-U1A	1 st submitted Update of the accepted Baseline R0B, which was rejected.
Project Name – R0B-U1B	Resubmittal of 1 st Update, which was accepted.
Project Name – R0B-U2A	2 nd submitted Update of the accepted Baseline R0B, which was rejected.
Project Name – R0B-U2B	Resubmittal of 2 nd Update, which was accepted.

PART 3 - EXECUTION

3.01 MONTHLY UPDATE CYCLE:

- A. Schedule Update Submittals are due every 30 days and are to be attached to each Application for Payment. The Schedule Update Total Actual Cost to Date must match the Application for Payment WORK Completed and Stored to Date amount. The DISTRICT will advise the CONTRACTOR of any change to the due dates.
- B. See Paragraph 2.03.D for the Draft Schedule Reports that are to be provided prior to the formal submission of the Schedule Update and application for payment.

3.02 CHANGES:

- A. Within ten (10) days after a schedule problem is identified by either CONTRACTOR or DISTRICT, or at any time the percentage of the dollar value for completed work is 10 % less than the value of the scheduled WORK, the CONTRACTOR shall submit a Construction Recovery Schedule that identifies the cause of the Change and any actions required by the CONTRACTOR to recover the schedule and complete the WORK within Contract Time. The CONTRACTOR shall promptly undertake appropriate action, at no additional cost to the DISTRICT, to recover the schedule whenever the current schedule shows that the CONTRACTOR did not or cannot achieve a milestone established in the Contract.
- B. Appropriate recovery actions include, but are not limited to, assignment of additional labor, subcontractors, equipment, shift or overtime work, expediting of submittal or deliveries, or any combination of thereof. Overlapping of activities or sequencing changes shall be deemed appropriate only if properly substantiated in the submittal. Recovery plans that are accepted by the DISTRICT that add, delete, or change activities, activity relationships, durations or constraints and cost or resource loading must be submitted as a Revision to the Baseline Schedule with zero Total Float in accordance with this specification. Once the revised baseline is accepted by the DISTRICT, the CONTRACTOR must prepare a Schedule Update of the Baseline Schedule with all actuals to date and submit it for acceptance.
- C. The CONTRACTOR's refusal, failure or neglect to take appropriate recovery action or to submit a written recovery statement shall constitute reasonable evidence that the CONTRACTOR is not prosecuting the WORK, or separable part, with the diligence that will ensure its completion within the Contract Time. Such lack of action shall constitute sufficient basis for the DISTRICT to recommend the withholding of some or all of any payment due and/or shall be considered grounds for termination of the Contract by the DISTRICT in accordance with Article 15 of the General Terms & Conditions.

END OF SECTION

SECTION 01320 CONSTRUCTION VIDEO AND PHOTOGRAPHS

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: This SECTION specifies administrative and procedural requirements for construction photographs.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 - Submittals

1.02 SUBMITTALS:

- A. Submit photographs electronically as specified in SECTION 01300 and in PART 3, this SECTION.

1.03 QUALITY ASSURANCE:

- A. Photographs and video shall be clear and sufficient to show significant detail, not blurred, or taken in shadow, nor too distant. The DISTRICT may require that the photographs or video be retaken should the quality be insufficient. Costs for such re-takes are the CONTRACTOR's responsibility at no extra cost to the DISTRICT.

PART 2 - PRODUCTS

2.01 PHOTOGRAPHIC REQUIREMENTS:

- A. Specified in PART 3, this SECTION.

PART 3 - EXECUTION

3.01 COLOR AUDIO VIDEO TAPING OF CONSTRUCTION AREA:

- A. Prior to beginning any construction, the CONTRACTOR shall prepare a color audio video recording of all the areas to be affected by construction in Digital Video format.
- B. The audio video recording shall be done within the two-week period prior to placement of materials or equipment on the construction area and furnished one week prior to the start of construction. The audio video recording shall be done with a DISTRICT Representative present.
- C. To preclude the possibility of tampering or editing in any manner, all video recordings shall, by electronic means, generate and display continuously and simultaneously on the screen digital information to include the date and time of recording. The time information shall consist of hours, minutes and seconds, separated by colons (i.e., 10:35:18).
- D. The audio video recording shall consist of one video and one audio track which shall be recorded simultaneously. All tracks shall consist of original live recordings and thus shall not be copies of other audio and video recordings. The audio track shall contain the narrative commentary.
- E. The rate of speed in the general direction of travel of the conveyance used during recording shall be controlled to provide a usable image. Panning rates and zoom-in, zoom-out rates shall be controlled sufficiently such that playback will produce clarity of the object viewed.
- F. All recording shall be done during times of good visibility. No recording shall be done during periods of visible precipitation, unless otherwise authorized by the DISTRICT.

- G. The DISTRICT shall have the authority to designate what areas may be omitted or added for audio video coverage.
- H. When conventional wheeled vehicles are used, the distance from the camera lens to the ground shall not be less than eight feet to insure perspective.
- I. In some instances, audio video coverage will be required in areas not accessible by conventional wheeled vehicles. Such coverage shall be obtained by walking or special conveyance by the DISTRICT.
- J. Areas covered shall include offsite roadways that will be subjected to heavy usage such as for haul routes or delivery of heavy components or equipment.

3.02 PROGRESS SITE PHOTOGRAPHS:

- A. The CONTRACTOR shall be responsible for photographs of the Site to show the existing and general progress of the WORK. The DISTRICT will advise as to which views are of interest. Photographs shall be taken of the following areas and at the following times.
 - 1. Existing Site conditions before Site WORK is started. Number of views shall be adequate to cover the Site.
 - 2. Progress of the WORK from beginning and throughout construction. Progress photos must be provided with each pay request. Pay requests will not be considered acceptable until photographs are provided. Number of views shall be adequate to cover the Site.
 - 3. Finished Project after completion of WORK. Number of views shall be adequate to show the finished WORK.
 - 4. If Project is not completed during the Contract Time, or authorized extensions, photographs shall continue to be taken at no increase in Contract Price.
- B. Provide all photographic images and video via file share platform compatible with the District system for access. All photographic images shall be delivered in JPG format. Label pictures and videos with the name and Contract number of Project, name of CONTRACTOR, description of view, and date photograph was taken.
- C. Deliver electronic files to DISTRICT with pay applications.

END OF SECTION

SECTION 01410 TESTING AND QUALITY CONTROL

PART 1 - GENERAL

1.01 SCOPE:

A. Summary of Work:

1. The CONTRACTOR shall provide and maintain an effective Quality Control Program that fulfills the requirements of Article 13 *Warranty and Guarantee, Tests and Inspections, Correction, Removal or Acceptance of Defective Work*" of the GENERAL TERMS & CONDITIONS.
2. The CONTRACTOR shall establish and implement a Quality Control Plan to perform sufficient inspection of all items of the WORK, including that of Subcontractors, to insure conformance to the Technical Specifications and the Drawings with respect to the materials, workmanship, construction, equipment performance, and identification.
3. The CONTRACTOR's job supervisory staff may be used for quality control, supplemented as necessary by additional personnel for surveillance or special technicians to provide capability for the controls required by the Technical Specifications. The CONTRACTOR's Quality Control Plan must clearly identify the quality control leader and personnel organizational system. The leader must have the authority to direct the removal and replacement of defective work.
4. After the Contract is awarded and before the construction begins, the CONTRACTOR shall meet with the DISTRICT or its representative to discuss quality control requirements. The meeting shall develop mutual understanding relative to the details of the Quality Control Plan, including the appropriate forms to be used for recording the quality control operations, inspections, administration of the Quality Control Plan, and the interrelationship of the CONTRACTOR and the DISTRICT inspection.
5. The CONTRACTOR shall submit his written Quality Control Plan for review, describing the activities and listing those inspection and testing activities that the CONTRACTOR will perform prior to beginning the WORK. The CONTRACTOR's Quality Control Plan shall describe how he will communicate timely notification to allow for testing and inspection activities performed by the DISTRICT, or its representatives, for on and off-site construction activities
6. All compliance inspections shall be recorded on the appropriate forms, including but not limited to the specific items required in each SECTION of the Technical Specifications. The completed forms, including record of corrective actions taken, shall be furnished to the DISTRICT. The DISTRICT's quality control representative will maintain a list of all deficiencies which are not corrected the same day as they are discovered.
7. The CONTRACTOR's Quality Control Plan shall include the coordination of any required inspections by state or local regulatory agencies. The CONTRACTOR shall provide the agencies with adequate notification and access to the Work for inspections.
8. Should recurring deficiencies in an item or items indicate that the Quality Control Plan is not adequate, the CONTRACTOR shall take corrective actions as directed by the DISTRICT to update the Quality Control Plan, to satisfactorily address and resolve any reoccurring deficiencies.

B. Related Work Specified Elsewhere:

1. SECTION 01300 – SUBMITTALS

1.02 TESTING LABORATORY SERVICES:

- A. All tests which require the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to the DISTRICT. The laboratory shall be staffed with experienced technicians, and shall be properly equipped, ACI certified, and fully qualified to perform the tests in accordance with the specified standards.

1.03 TESTING LABORATORY SERVICES FURNISHED BY CONTRACTOR: (Not Applicable)

- A. The testing that the DISTRICT will coordinate and pay for is described in paragraph 1.04 below. All other testing required in connection with the performance of the WORK (which are identified as the CONTRACTOR's responsibility in the Contract Documents) shall be performed and paid for by the CONTRACTOR, and a certified copy of the results will be furnished to the DISTRICT within five (5) days of the test.
- B. The CONTRACTOR is also responsible for all testing and inspection services required to achieve an effective Quality Control Program, to assure that the WORK strictly complies with the Contract requirements. The CONTRACTOR shall pay all costs for such services. The CONTRACTOR shall also pay for any tests performed by the DISTRICT which do not meet the requirements of the Technical Specifications and as described below.

1.04 TESTING LABORATORY SERVICES FURNISHED BY DISTRICT:

- A. The DISTRICT shall be reimbursed by the CONTRACTOR for the cost of any CONTRACTOR-requested tests or inspections, or tests on an item purported to be ready, which fail to meet the Technical Specification requirements. The DISTRICT may withhold such amounts from payments otherwise due to the CONTRACTOR.
- B. Arrangements for the delivery of samples and test specimens to the testing laboratory under this paragraph will be made by the DISTRICT. The testing laboratory shall perform all laboratory tests within a reasonable time consistent with the specified standards and shall furnish a written report of each test.
- C. The CONTRACTOR shall furnish all sample materials and cooperate in the sampling and field testing activities, interrupting the WORK when necessary.
- D. When sampling or testing activities are performed in the field by testing laboratory personnel, the CONTRACTOR shall furnish personnel and facilities to assist in the activities.
- E. The Testing Laboratory contracted by the DISTRICT will not be authorized to:
 - 1. Release, revoke, alter or enlarge on requirements of the Contract Documents.
 - 2. Approve or accept any portion of the WORK.
 - 3. Perform any duties of the CONTRACTOR.
 - 4. The CONTRACTOR shall provide at least 48 hours advance notice of any work for which he may desire required testing for compliance by the DISTRICT.

1.05 TRANSMITTAL OF TEST REPORTS:

- A. Written reports of test and engineering data furnished by the CONTRACTOR shall be submitted as specified in SECTION 01300 – SUBMITTALS.

1.06 ACCEPTANCE OF WORK:

- A. Final acceptance of the Work shall be based on the requirements of the individual specification section controlling materials and installation of the specific work item, and the results of the DISTRICT's Quality Assurance/Quality Control Program.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION

SECTION 01510 TEMPORARY UTILITIES AND FACILITIES

PART 1 - GENERAL

1.01 SUMMARY:

- A. This SECTION includes requirements of a temporary nature not normally incorporated into final WORK. It includes the following:
 - 1. Utility services
 - 2. Construction and support facilities
 - 3. Construction aids
 - 4. Fire protection
 - 5. Bypass flow
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – SUBMITTALS
 - 2. SECTION 01590 - FIELD OFFICES AND SHEDS

1.02 APPLICABLE STANDARDS AND PUBLICATIONS:

- A. Standards or Codes: The edition of the publications of the organizations listed below in effect at the time of the advertisement for bids form a part of this specification to the extent referenced. See the various paragraphs for the specified standard. In the case of a conflict between the requirements of this SECTION and those of the listed document, the requirements of this SECTION shall prevail.
 - 1. American National Standards Association (ANSI):
 - a. A10 Series - Safety Requirements for Construction and Demolition
 - b. ANSI/ASME PTC 19.1-1998 Test Uncertainty, Instrument and Apparatus
 - 2. National Electrical Contractors Association (NECA):
 - a. Electrical Design Library - Temporary Electrical Facilities
 - 3. National Fire Protection Association (NFPA):
 - a. NFPA 10 - Portable Fire Extinguishers
 - b. NFPA 70 - National Electrical Code
 - c. NFPA 241 - Safeguarding Construction, Alterations, and Demolition Operations
 - 4. National Electrical Manufacturers Association (NEMA)
 - 5. Underwriters Laboratories (UL)
 - 6. Florida Department of Transportation Standard Specifications for Road and Bridge Construction
 - 7. Florida Trench Safety Act (90-96, Laws of Florida)

1.03 SUBMITTALS:

- A. Submit in accordance with SECTION 01300.
- B. Site Plan: Submit to the DISTRICT a Site Plan indicating CONTRACTOR's facilities including:
 - 1. CONTRACTOR office trailers
 - 2. Materials and Equipment Yard
 - 3. Parking

1.04 QUALITY ASSURANCE:

- A. Regulations: Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:
 - 1. Hendry County
 - 2. Building Code requirements

3. Utility company regulations
 4. Police, Fire Department, and rescue squad rules
 5. Environmental protection regulations
- B. Standards:
1. Comply with NFPA 10 and 241, and ANSI A10 Series standards "Temporary Electrical Facilities."
 2. Comply with NEMA, NECA, and UL standards and regulations for temporary electric service. Install service in compliance with NFPA 70.
- C. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.01 MATERIALS AND EQUIPMENT:

- A. Provide new materials and equipment. If acceptable to the DISTRICT, undamaged previously used materials and equipment in serviceable condition may be used. Provide materials and equipment suitable for the use intended, of capacity for required usage, and meeting applicable codes and standards. Comply with requirements of DIVISIONS 2 through 16.
- B. Water: Provide potable water approved by local health authorities.
- C. Water Hoses: Provide 3/4-inch (19-mm), heavy-duty, abrasion-resistant, flexible rubber hoses 100 feet (30 m) long, with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- D. Electrical Outlets: Provide properly configured, NEMA-polarized outlets to prevent insertion of 110- to 120V plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light for connection of power tools and equipment.
- E. Electrical Power Cords: Provide grounded extension cords. Use hard-service cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress. Do not exceed safe length-voltage ratio.
- F. Lamps and Light Fixtures: Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered-glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- G. Fire Extinguishers: Provide hand-carried, portable, UL-rated, Class A fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, Class ABC, dry-chemical extinguishers or a combination of extinguishers of NFPA-recommended classes for the exposures. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent, and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.01 TEMPORARY UTILITIES:

- A. General:
 1. Engage the appropriate local utility company to extend temporary electric and phone service to the Project area from nearby existing utilities. Where utility company provides only part of the service, provide the remainder with matching, compatible materials and equipment. Comply with utility company recommendations.
 2. Provide adequate utility capacity at each stage of construction. Prior to availability of temporary utilities at the Site, or in remote areas without services, provide trucked-in services as required for start-up and construction operations.

3. Furnish, install and maintain temporary utilities required for adequate construction, safety and security. Modify, relocate and extend systems as WORK progresses. Repair damage caused by installation or use of temporary facilities. Grade the areas of Site affected by temporary installations to required elevations and grades, and clean the area. Remove on completion of WORK or until service or facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
4. The types of temporary construction utilities and facilities required include, but are not limited to, potable drinking water, wastewater, drainage, dewatering equipment, enclosure of WORK, ventilation, electrical power, lighting, hoisting facilities, stairs, ladders, and roads.
5. Inspect and test each service before placing temporary utilities in use. Arrange for required inspections and tests by governing authorities, and obtain required certifications and permits for use.
6. Materials used for temporary service shall not be used in a permanent system unless so specified or acceptable to the DISTRICT.

3.02 TEMPORARY ELECTRICITY AND LIGHTING:

A. New Service:

1. Arrange with utility company to extend existing electric service to temporary office trailers.
2. Connect temporary service in a manner directed by utility company officials. Provide separate meter for metering of power used by all entities authorized to be at or perform WORK at the Project Site.
3. The electric service shall be of sufficient capacity and characteristics for the various construction tools, machinery, lights, heating and air conditioning, pumps, and other tools required by CONTRACTOR and his Subcontractors. In areas of the Project where permanent or temporary power service from the local utility is not available, the CONTRACTOR shall supply and maintain engine-driven, power-generator sets.
4. Provide weatherproof, grounded, power distribution system sufficient to accommodate construction operations requiring power, use of power tools, electrical heating and lighting. Provide overload protection. Supply power for electric welding, if any, from engine-driven, power-generator sets.
5. Provide adequate artificial lighting for all areas of WORK when natural light is not adequate for WORK.
6. Sufficient light shall be provided for general construction areas, with additional sufficient lighting for specific tasks and to meet safety requirements.

B. Use of Permanent System:

1. Prior to use of permanent system to be installed by the power company for construction purposes, obtain written permission of the DISTRICT.
2. Maintain permanent system as specified for temporary facilities.

C. Costs of Installation and Operation:

1. Pay fees and charges for permits and applications.
2. Pay costs of installation, maintenance, removal of temporary services, and restoration of any permanent facilities used.
3. Pay costs of electrical power used (if applicable).
4. Pay costs of furnishing, operating, and maintaining engine-driven power-generator sets, where applicable.

3.03 TEMPORARY HEAT AND VENTILATION:

A. General:

1. Provide temporary heat, ventilation and cooling as required to maintain adequate environmental conditions in temporary office trailers and storage sheds and to facilitate progress of the WORK,

to meet specified minimum conditions for the installation of materials, and to protect materials and finishes from damage. Protect from adverse affects of low temperatures or high humidity, and to prevent hazardous accumulations of dust, fumes, vapors, or gases.

2. Methods of heating and fuel shall be suitable for particular purposes. Portable heaters shall be standard approved units with controls.

B. Costs of Installation and Operation:

1. Pay fees and charges for applications, permits, and inspections.
2. Pay costs of installation, operation, maintenance, removal of equipment, and restoration of existing or permanent facilities if used.
3. Pay cost of power and fuel used.

3.04 TEMPORARY TELEPHONE SERVICE:

A. General:

1. Arrange with local telephone service company to extend existing direct line telephone service to the CONTRACTOR's field office site for the use of the construction personnel and employees.
2. Telephone Service: Local Provider.
3. Minimum Service Required:
 - a. One direct line instrument in superintendent's field office.
 - b. Adequate number of service lines and instruments for needs of trades.
 - c. Other instruments and pay telephone station(s) at the option of the CONTRACTOR, or as required by regulations.
 - d. Provide a dedicated telephone line for a fax machine in the Superintendent's field office.
4. CONTRACTOR shall arrange with local cellular/mobile telephone service company to provide mobile telephone service for use by CONTRACTOR and so CONTRACTOR can be reached throughout the entire Project area during normal working hours.

B. Costs of Installation and Operation:

1. Pay all costs for installation, maintenance and removal, and service charges for local calls. Toll charges shall be paid by the party who places the call.

3.05 TEMPORARY SANITARY FACILITIES:

A. CONTRACTOR-Furnished Facilities:

1. Furnish, install and maintain temporary sanitary facilities for use through construction period. Remove on completion of WORK. A holding tank that is maintained is acceptable.
2. Provide for all construction workers under this Contract and representatives at the Site.
3. Toilet facilities shall be of the chemical-aerated recirculation or combustion type, properly vented and fully enclosed with a glass- fiber-reinforced polyester shell or similar nonabsorbent material.

3.06 TEMPORARY CONSTRUCTION AIDS:

A. General:

1. Provide construction aids and equipment required by personnel, available for DISTRICT observers' use, and to facilitate the execution of the WORK; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes, and other such facilities and equipment.
2. Materials may be new or used, must be suitable for the intended purpose and meet the requirements of applicable codes, regulations and standards.

3.07 INSTALLATION AND REMOVAL:

- A. Relocation: Relocate construction aids as required by progress of construction, by storage or WORK requirements, and to accommodate requirements of DISTRICT and other CONTRACTORS at the Site.

- B. Removal: Remove temporary materials, equipment and services when construction needs can be met and allowed by use of permanent construction, or at completion of the Project.
- C. Repair: Clean and repair damage caused by installation or by use of temporary facilities.
 - 1. Remove foundations and underground installations for construction aids.
 - 2. Grade the areas of the Site affected by temporary installations to required elevations and clean the area.

END OF SECTION

SECTION 01530 TEMPORARY BARRIERS AND CONTROLS

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: This SECTION includes General Requirements for:
 - 1. Protection of the WORK
 - 2. Protection of existing property
 - 3. Barriers
 - 4. Security
 - 5. Environmental controls
 - 6. Access roads and parking areas
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – SUBMITTALS
 - 2. SECTION 01590 – FIELD OFFICES AND SHEDS
 - 3. SECTION 01700 – CONTRACT CLOSEOUT
 - 4. SECTION 02435 – TURBIDITY CONTROL AND MONITORING

1.02 APPLICABLE STANDARDS AND PUBLICATIONS:

- A. Standards or Codes: The edition of the publications of the organizations listed below in effect at the time of the advertisement for bids form a part of this specification to the extent referenced. In the case of a conflict between the requirements of this SECTION and those of the listed document, the requirements of this SECTION shall prevail.
 - 1. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 SAFETY AND PROTECTION OF WORK AND PROPERTY:

- A. General:
 - 1. The CONTRACTOR shall provide for the protection of the WORK as set forth in the GENERAL TERMS & CONDITIONS. Provide protection at all times against rain, wind, storms, frost, freezing, condensation, or heat so as to maintain all WORK and Equipment and Materials free from injury or damage. At the end of each day all new WORK likely to be damaged shall be appropriately protected.
 - 2. The CONTRACTOR shall notify the DISTRICT immediately if at any time, operations are stopped due to conditions which make it impossible to continue or to obtain proper results.
 - 3. The CONTRACTOR shall construct and maintain all necessary temporary drainage and do all pumping necessary to keep excavations, pits, and trenches dewatered sufficiently to permit continuous construction.

4. The CONTRACTOR shall restrict access to roofs except as required by the WORK. Where access is required, provide protection with plywood, boards, or other suitable materials.
- B. Property Other than DISTRICT's:
1. The CONTRACTOR shall provide for the protection of property as set forth in the GENERAL TERMS & CONDITIONS. Report immediately to the owners thereof and promptly repair damage to existing facilities resulting from construction operations.
 2. The Florida Power and Light Company (FPL) contact is Eric Walther, 239-332-9168, eric.walther@fpl.com. The CONTRACTOR shall contact the power company a minimum of seven (7) calendar days prior to performing WORK within 500' of power transmission line property, right-of-way or easement lines.
 3. The applicable requirements specified for protection of the WORK shall also apply to the protection of existing property of others.
 4. The CONTRACTOR shall restore all property affected by the CONTRACTOR's operations to the original or better condition, to the satisfaction of the DISTRICT.

3.02 BARRIERS:

A. General:

1. The CONTRACTOR shall furnish, install, and maintain suitable barriers as required to prevent public entry, protect the public, and to protect the WORK, existing facilities, trees (to be protected as directed by the District), and plants from construction operations. Remove the barriers when no longer needed or at completion of the WORK.
2. The CONTRACTOR may use new or used materials, suitable for the intended purpose, but must not violate requirements of applicable codes and standards or of regulatory agencies.
3. Barriers shall be of a neat and reasonably uniform appearance, structurally adequate for the required purposes.
4. The CONTRACTOR shall maintain barriers in good repair and a clean condition for adequate visibility.
5. The CONTRACTOR shall relocate barriers as required by progress of the WORK.
6. The CONTRACTOR shall repair damage caused by the installation of barriers and restore damaged areas to original or better condition, to the satisfaction of the DISTRICT.

3.03 ENVIRONMENTAL CONTROLS:

A. Dust Control:

1. If appropriate and at the discretion of the DISTRICT, the CONTRACTOR shall provide and apply methods of positive dust control to minimize raising dust from construction operations.
2. The CONTRACTOR shall cover materials transported to and from Site as necessary to prevent depositing material on offsite roadways or creating dust.

B. Water and Erosion Control:

1. The CONTRACTOR shall provide methods necessary to control surface water to prevent damage to the WORK, the Site, or adjoining properties as specified in SECTION 02435 - TURBIDITY CONTROL AND MONITORING.
2. The CONTRACTOR shall control fill, grading, and ditching to direct surface water away from excavations and other construction areas, and to direct surface water to proper storage and/or conveyance facilities.

3. The CONTRACTOR shall control surface water and ground water as necessary to prevent flooding, erosion, or other damage to any portion of the Site and/or to adjoining areas.
- C. Debris Control and Clean-Up:
1. The CONTRACTOR shall keep the premises free at all times from accumulations of debris, waste materials, and rubbish. The CONTRACTOR's responsibilities shall include, but not be limited to the following:
 - a. Adequate trash receptacles at the Site, emptied promptly when filled.
 - b. Periodic cleanup to avoid hazards or interference with operations at the Site and to maintain the Site in a reasonably neat condition.
 - c. The keeping of construction materials such as forms and scaffolding neatly stacked.
 - d. Immediate cleanup to protect the WORK by removing splattered concrete, oil, paint, corrosive liquids, and cleaning solutions from walls, floors, and other surfaces before the surfaces are marred.
 2. The CONTRACTOR shall prohibit overloading of trucks to prevent spillages on access and haul routes. Provide periodic inspection of traffic areas to enforce requirements.
 3. Final cleanup is specified in SECTION 01700 – CONTRACT CLOSEOUT.
- D. Pollution Control:
1. The CONTRACTOR shall provide methods, means, and facilities required to prevent contamination of soil, water, or atmosphere by the discharge of hazardous or toxic substances from construction operations.
 2. The CONTRACTOR shall provide equipment and personnel and perform emergency measures required to contain any spillages, and to remove contaminated soils or liquids. Excavate and dispose of any contaminated earth off-site in approved locations, and replace with suitable compacted fill and topsoil.
 3. The CONTRACTOR shall take special measures to prevent harmful substances from entering public waters, sanitary sewers, or storm sewers.
 4. If hazardous materials are discharged, report to authorities as required by applicable law or regulations and notify the DISTRICT, immediately.

3.04 TRAFFIC CONTROL AND USE OF ROADWAYS:

- A. Traffic Control:
1. Traffic control is required to accommodate all local landowners and utility companies accessing the site. The CONTRACTOR shall provide, operate, and maintain equipment, services, and personnel, with traffic control and protective devices, as required to expedite safe vehicular traffic flow on haul routes, at Site entrances, onsite access roads, and parking areas. This includes barricades and other devices or personnel as necessary to adequately protect the public. Prepare and submit a Traffic Control Plan to DISTRICT for review.
 2. The CONTRACTOR shall remove temporary equipment and facilities when no longer required. Restore grounds to original, better, or specified conditions.
 3. The CONTRACTOR shall provide and maintain suitable detours or other temporary expedients if necessary.
 4. Bridge over open trenches where necessary to maintain traffic.
- B. Maintenance of Roadways:

1. The CONTRACTOR shall repair off-site roads, water control and DISTRICT structures and levees damaged by operations. Keep traffic areas as free as possible of excavated materials and maintain in a manner to eliminate dust, mud, and hazardous conditions.
2. All operations and repairs shall meet the approval of owners or agencies having jurisdiction.

3.05 SECURITY:

- A. The CONTRACTOR is solely responsible for initiating and maintaining security at the construction Site. CONTRACTOR shall take all necessary precautions for the security of, and shall provide the necessary protection to:
 1. Materials and equipment incorporated into the WORK, or stored on-site prior to incorporation into the WORK.
 2. Temporary field offices and sheds, and their contents including those listed in SECTION 01590 – FIELD OFFICES AND SHEDS.
 3. Plant and equipment including any equipment furnished for use by the DISTRICT.
- B. The CONTRACTOR shall replace, in kind, any materials or equipment lost, damaged or destroyed at no cost to the DISTRICT.

END OF SECTION

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary: This SECTION includes requirements for temporary field offices and other structures for office and storage space required by CONTRACTOR and the DISTRICT.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01600 - EQUIPMENT AND MATERIALS
- C. Use of Existing Facilities: Existing facilities at the Site shall not be used for field offices.
- D. Use of Permanent Facilities: Permanent facilities, when substantially completed, shall not be used for field offices or for storage.

PART 2 - PRODUCTS

2.01 FIELD OFFICES:

- A. CONTRACTOR's Office:
 - 1. Provide a field office for CONTRACTOR's personnel in the construction compound. CONTRACTOR shall provide a Submittal per SECTION 01300 - SUBMITTALS for DISTRICT approval on the location and set-up of the CONTRACTOR's field office.
 - 2. The CONTRACTOR's field office shall be of size required for general use, with lights, heat, furnishings, telephone service, and other necessary facilities and utilities required by CONTRACTOR's operations.

2.02 STORAGE SHEDS AND TRAILERS:

- A. On-Site:
 - 1. The CONTRACTOR shall provide temporary buildings or trailers needed for storage of Equipment and Materials installed under this Contract (and those furnished by DISTRICT or others under separate Contract).
 - 2. Provide ventilation and heating as required by Equipment and Material stored or as per MANUFACTURER's requirements.
 - 3. The CONTRACTOR shall be solely responsible for temporary buildings and trailers located on site.
- B. Off-Site:
 - 1. The CONTRACTOR shall advise the DISTRICT of any arrangements made for storage of Equipment and Materials in a place other than DISTRICT's Site. The CONTRACTOR shall furnish evidence of insurance coverage with Application for Payment in conformance with the SECTION 00700 - GENERAL TERMS & CONDITIONS.

PART 3 - EXECUTION

3.01 LOCATION, INSTALLATION AND MAINTENANCE:

- A. General:
 - 1. Place temporary buildings, trailers, and stored materials in locations acceptable to DISTRICT.
 - 2. Installed field offices and sheds to resist winds and elements of the locality where installed.
 - 3. Remove when no longer needed at the Site or when WORK is completed.
 - 4. Keep approach walks free of leaves, mud, water, or ice.
 - 5. At completion of WORK, remove temporary buildings and trailers, foundations (if any), utility services, and debris.

6. Prepare ground or paved areas as indicated and/or as specified in applicable SECTIONs.

END OF SECTION

SECTION 01700 CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: This SECTION includes administrative and procedural requirements for Contract Closeout including, but not limited to, the following:
 - 1. Inspection procedures
 - 2. Project record document submittal
 - 3. Operation and maintenance manual submittal
 - 4. Submittal of warranties
 - 5. Final cleaning
 - 6. CONTRACTOR's Certification
- B. Closeout requirements for specific construction activities are included in the appropriate SECTIONs in DIVISIONS 1 through 16.
- C. Related Work Specified Elsewhere:
 - 1. SECTION 01300 - SUBMITTALS
 - 2. SECTION 01050 - FIELD ENGINEERING
 - 3. SECTION 01530 - TEMPORARY BARRIERS AND CONTROLS

1.02 SUBSTANTIAL COMPLETION:

- A. Preliminary Procedures: Before requesting inspection for certification of Substantial Completion, the CONTRACTOR shall satisfy the following:
 - 1. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications, and similar documents. Submit in accordance with SECTION 01300.
 - 2. Obtain and submit releases enabling the DISTRICT unrestricted use of the WORK and access to services and utilities. Include Certificates of Occupancy (C.O.), operating certificates, and similar releases, as required.
 - 3. Submit Record Documents, including but not limited to, Project photographs, Boundary surveys, all As-Built Surveys as per SECTION 01050 and similar record information as specified in Paragraph 1.04. All drawings shall be scanned and submitted in accordance with SECTION 01300. All other documents shall also be scanned and submitted in accordance with SECTION 01300.
 - 4. Complete final cleanup requirements, including touch up painting.
 - 5. Touch up and otherwise repair and restore marred, exposed finishes.
- B. Inspection Procedures: On receipt of a request for inspection, the DISTRICT will either proceed with inspection or advise the CONTRACTOR of unfilled requirements. The DISTRICT will prepare the Certificate of Substantial Completion following inspection or advise the CONTRACTOR of WORK that must be completed or corrected before the certificate will be issued.
 - 1. The DISTRICT will reschedule the inspection when in its opinion, the WORK is substantially complete.

1.03 FINAL ACCEPTANCE:

- A. Preliminary Procedures: Submit certification by CONTRACTOR that WORK has been completed in accordance with the Contract Documents to the knowledge of the CONTRACTOR. Before requesting final inspection, complete the following:
 - 1. Submit the final payment request with releases and supporting documentation. Include insurance certificates for products and completed operations where required.

2. Submit a letter certifying that all items listed as part of the Certification of Substantial Completion have been completed or corrected.
 3. Submit consent of surety to final payment.
 4. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 5. Submit Release of Liens (from the Prime, and all Subcontractors, Vendors and Suppliers).
 6. Submit Maintenance Bond (if applicable)
 7. The above shall be submitted in accordance with SECTION 01300.
- B. Reinspection Procedure: The DISTRICT will reinspect the WORK upon receipt of notice that the WORK, including inspection list items from earlier inspections, has been completed.
1. Upon completion of reinspection, the DISTRICT will advise the CONTRACTOR of WORK that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.
 2. If necessary, the reinspection will be repeated.
- C. Return all keys furnished by the DISTRICT. The CONTRACTOR shall forfeit his key deposit for keys that are not returned.

1.04 RECORD DOCUMENT SUBMITTALS:

- A. General: Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure location. Provide access to record documents for the DISTRICT's reference during normal working hours.
- B. As-Built Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Drawings and Shop Drawings. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set. Mark the set to show the actual installation where the installation varies substantially from the WORK as originally shown. Mark which drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Call attention to each entry by drawing a "cloud" around the areas affected.
- C. The DISTRICT will make electronic copies of whatever electronic versions of the Drawings exist, available to the CONTRACTOR for As-Built purposes. The CONTRACTOR must obtain concurrence from the DISTRICT as to form and content of record information provided in electronic format prior to proceeding, but in general, information similar to that noted below needs to be provided.
1. Record information concurrently with construction progress.
 2. Mark record sets with red erasable pencil. Mark each document "AS-BUILT DRAWINGS" in neat, large, printed letters.
 3. Mark As-Built invert elevations for all water control structures, culverts, etc. Refer to SECTION 01050 for structures which require a permanent benchmark.
 4. Mark new information that is important to the DISTRICT that is not shown on Drawings or Shop Drawings.
 5. Note related Change-Order numbers where applicable.
 6. Include the following:
 - a. Where Submittals (like Shop Drawings) are used for mark-up, record a cross-reference at corresponding location on Drawings.
 - b. Field changes of dimension and detail.
 - c. Changes made by Change Order or other Modifications.
 - d. Details not on original Drawings.
 - e. As-Built shall also include a plot of the actual excavation cross-sections plotted at the same station as overlaid on top of the design cross-sections.
 - f. As-Built shall include a plot of the actual pre-load embankment cross-sections. Refer to SECTION 01050.

- g. Give particular attention to concealed elements that would be difficult or expensive to locate at a later date.
 - 7. Record Specifications: Maintain one (1) complete copy of the Contract Documents including addenda. Include with the Contract Documents one (1) copy of other written construction documents, such as Requests for Information (RFIs), Change Orders and modifications issued in printed form during construction.
 - 8. Mark these documents to show substantial variations in actual WORK performed in comparison with the text of the Specifications and modifications.
 - 9. Give particular attention to substitutions and selection of options and information on concealed construction that cannot otherwise be readily discerned later by direct observation.
 - 10. Note related As-Built information and Product Data.
 - 11. Upon completion of the WORK, submit Record Specifications to the DISTRICT for the DISTRICT's records on CD in PDF format.
 - 12. Include the following:
 - a. MANUFACTURER, trade name, catalog number, and Supplier of each product and item of equipment actually installed, including optional and substitute items
 - b. Changes made by Addendum, Change Order, or other Modifications
 - c. Related Submittals
 - 13. Affix the CONTRACTOR's corporate seal on the cover sheet indicating the documents within are representative of the as-built condition of the Project. The seal shall be signed by an officer of the company.
- D. Record Product Data: Provide one (1) copy of each Product Data submittal. Note related Change Orders and markup of Record Documents.
- 1. Mark these documents to show significant variations in actual WORK performed in comparison with information submitted. Include variations in products delivered to the Site and from the MANUFACTURER's installation instructions and recommendations.
 - 2. Give particular attention to concealed products and portions of the WORK that cannot otherwise be readily discerned later by direct observation.
- E. Record Sample Submitted: Immediately prior to Substantial Completion, the CONTRACTOR shall meet with the DISTRICT's personnel at the Project Site to determine which Samples are to be transmitted to the DISTRICT for record purposes. Comply with the DISTRICT's instructions regarding packaging, identification, and delivery to the DISTRICT.
- F. Miscellaneous Record Submittals: Refer to other Specification SECTIONS for requirements of miscellaneous record keeping and submittals in connection with actual performance of the WORK. Immediately prior to the date or dates of Substantial Completion (unless otherwise specified), complete miscellaneous records and place in good order. Identify miscellaneous records properly, bind or file, and submit to the DISTRICT for the DISTRICT's records.
- G. Warranties and Bonds: Submit original documents as specified in Section 00700 - General Terms & Conditions, Supplemental Conditions, SECTION 01300, and technical specifications.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 FINAL CLEANING:

- A. General: The General Terms & Conditions require general cleaning during construction. Regular Site cleaning is included in SECTION 01530.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with MANUFACTURER's instructions.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion.
 - a. Clean the Site of rubbish, litter, and other foreign substances. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
 - b. Remove temporary structures, tools, equipment, supplies, and surplus materials.
 - c. Remove temporary protection devices and facilities which were installed to protect previously completed WORK.
- C. Removal of Protection: Remove temporary protection and facilities installed for protection of the WORK during construction.
- D. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the DISTRICT's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems, surface waters or wetlands. Remove waste materials from the Site and dispose of lawfully.
 1. Where extra materials of value remain after completion of associated WORK, they become the DISTRICT's property. Dispose of materials of no value to the DISTRICT as directed by the DISTRICT.
- E. Repairs:
 1. Repair damaged protective coated surfaces.
 2. Repair roads and other items damaged or deteriorated because of construction operations, including those which have been damaged, but are not located within the Project limits.
 3. Restore all ground areas affected by construction operations.

END OF SECTION

SECTION 02100 SITE PREPARATION

PART 1 -GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall furnish all labor, materials, and equipment necessary for complete and proper site preparation within the areas shown on the Drawings and specified herein and observe permit conditions.
- B. Related Sections include but are not necessarily limited to:
 - 1. Division 1 – GENERAL REQUIREMENTS
 - 2. Section 02110 – CLEARING AND LAND PREPARATION
 - 3. Section 02114 – TREE REMOVAL
 - 4. Section 02435 – TURBIDITY CONTROL AND MONITORING
 - 5. Section 02436 – ENVIRONMENTAL PROTECTION

1.02 APPLICABLE PUBLICATIONS:

- A. Applicable Standards:
 - 1. Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition (FDOT)

1.03 DEFINITIONS: (Not Applicable)

1.04 SUBMITTALS: (Not Applicable)

1.05 QUALIFICATIONS: (Not Applicable)

1.06 RESPONSIBILITIES:

- A. The CONTRACTOR shall have all erosion and sediment control measures in place.

1.07 CERTIFICATIONS AND TESTINGS: (Not Applicable)

1.08 INSPECTION COORDINATION: (Not Applicable)

1.09 WARRANTY: (Not Applicable)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 TRAFFIC CONTROL: The CONTRACTOR shall provide proper warning devices and barriers for protection of the public and workmen in accordance with FDOT Specification Section 102 Traffic Control and local regulations.

3.02 STANDARD CLEARING AND GRUBBING: Standard site clearing and grubbing, in accordance with Specification Section 02110, shall be performed within the areas shown on the Drawings or otherwise noted in the above referenced specification.

3.03 EROSION CONTROL:

- A. The CONTRACTOR shall prevent and control erosion and water pollution as per Specification Section 02346 and Florida Department of Environmental Protection (FDEP) regulations and permit conditions.
 - B. The CONTRACTOR shall comply with the conditions described in Section 02435 and the Drawings.
 - C. The CONTRACTOR shall prevent and control dust.
- 3.04 PROTECTION AND/OR RELOCATION OF EXISTING FACILITIES: Existing facilities such as storm drains, roadways, water lines, light poles, conduits, fences, utility and telephone lines, etc. are to be carefully protected from damage during all phases of the construction. The CONTRACTOR shall make all necessary arrangements with the owner of the facility and be responsible for all costs involved in the proper protection, relocation or other work that such owners deem necessary. See General Terms & Conditions.
- 3.05 UNDERGROUND UTILITIES: The CONTRACTOR shall provide all necessary liaisons with other utilities (underground) by notification, 48 hours in advance, of any digging by telephoning the appropriate Utility Notification Center and local utilities.

END OF SECTION

SECTION 02110 CLEARING AND LAND PREPARATION

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall include the removal of trees and other vegetation from areas where earthwork or other construction operations specified herein are to be performed. This section also includes land preparation activities for excavation and fill areas.
- B. Related Sections include but are not necessarily limited to:
 - 1. DIVISION 1 – GENERAL REQUIREMENTS
 - 2. SECTION 01300 - SUBMITTALS
 - 3. SECTION 02100 – SITE PREPARATION
 - 4. SECTION 02200 - EARTHWORK
 - 5. SECTION 02114 – TREE REMOVAL
 - 6. SECTION 02435 – TURBIDITY CONTROL AND MONITORING
 - 7. SECTION 02436 – ENVIRONMENTAL PROTECTION

1.02 APPLICABLE PUBLICATIONS:

- A. Florida Department of Transportation (FDOT)
 - 1. Section 104 – Prevention, Control, and Abatement of Erosion and Water Pollution

1.03 DEFINITIONS: (Not Applicable)

1.04. SUBMITTALS:

- A. Prior to beginning the WORK, CONTRACTOR shall submit a detailed plan for clearing and land preparation in conformance with SECTION 01300 - SUBMITTALS. The plan shall detail the sequence of WORK and describe the CONTRACTOR's planned method of clearing and land preparation activities.
- B. The CONTRACTOR shall obtain all necessary permits to accomplish all of the Work.

1.05 QUALIFICATIONS: (Not Applicable)

1.06 RESPONSIBILITIES:

- A. The CONTRACTOR is responsible for performing all Work in accordance with all applicable regulations, ordinances and code requirements from the appropriate local, state and/or federal jurisdiction for the project.
- B. The CONTRACTOR shall ensure the safe passage of persons around areas of clearing and land preparation. The CONTRACTOR shall conduct its operations to prevent injury to adjacent structures, vegetation designated to remain, other facilities and persons.
- C. Traffic:
 - 1. The CONTRACTOR shall conduct its operations and the removal of cleared materials to ensure minimum interference with existing access roads and other adjacent occupied or used facilities.

2. The CONTRACTOR shall not block or otherwise obstruct access roads or other occupied or used facilities without permission from the DISTRICT. Where blockage is allowed, the CONTRACTOR shall provide alternate routes around closed or obstructed traffic ways.
- D. The CONTRACTOR may commence clearing or land preparation within portions of the project falling within the limits of temporary construction easements or utility Right-of-Way only with specific permission from the DISTRICT for each activity and location. All requirements under A and B above apply within these limits.
- E. For WORK within Florida Power & Light (FPL) easements, the CONTRACTOR shall coordinate with FPL that equipment and procedures for the WORK are approved by FPL.
- F. The CONTRACTOR shall not purposefully disrupt or disconnect any type of utility, electric or irrigation service without first obtaining the written permission of the DISTRICT. Requests for disconnection must be in writing and received by the DISTRICT at least seven calendar days prior to the time of the requested interruption.
- G. The CONTRACTOR shall take within two hours and complete within 48 hours the necessary steps to repair, replace, or restore all services to any utilities or other facilities, which are disrupted due to his or her operations.
- H. Should utilities, structures, etc., be encountered that interfere with the WORK; and are not shown on the Plans; the CONTRACTOR shall notify the DISTRICT immediately.

1.07 CERTIFICATIONS AND TESTING: (Not Applicable)

1.08 INSPECTION COORDINATION: The CONTRACTOR shall provide access to the WORK for the DISTRICT as requested for inspection. The CONTRACTOR shall provide 48 advance hours notice of its intention to begin new WORK activities.

1.09 WARRANTY: (Not Applicable)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 GENERAL:

- A. Clear, grub and strip topsoil within limits of excavations, fills, and borrow areas.
- B. Clear only within the areas indicated.
- C. All canals and ditches within areas that are to receive fill shall be dewatered, cleared, grubbed, and stripped of topsoil, vegetative matter and associated root systems, and shall be over-excavated as shown on the Drawings. The side slopes of the canals and ditches shall be graded to the slope as shown on the Drawings, prior to backfilling in accordance with SECTION 02200 - EARTHWORK.
- D. Clearing and land preparation shall proceed sufficiently ahead of earthwork activities to minimize disruption and to allow time for determination of the adequacy of the procedure.

3.02 CLEARING:

- A. Clear from within limits of construction shrubs, brush, downed timber, rotten wood, heavy growth of grass and weeds, rubbish, and debris. Within limits indicated, all trees shall be removed.

- B. Structures, piles of rubble, and other man-made items not designated on the plans to remain shall be removed. Concrete slabs and roads within the reservoir interior not affected by the WORK may remain. Bituminous pavements, if any, shall be stripped and removed from the site.
- C. Remove all exposed irrigation and drainage piping and appurtenances. Exploratory trenching shall be completed to locate irrigation and drainage piping as described in SECTION 02200 - EARTHWORK.
- D. Remove any garbage or other waste debris recovered during clearing.
- E. On completion of the clearing, remove all sticks, rubbish and other extraneous material.
- F. All trees to remain in the project area, as designated by the DISTRICT, shall be protected from damage with tree barricades. Existing trees in the construction compound are intended to be left in place.
- G. All WORK shall be performed without damage to existing amenities to remain, including structures, trees and shrubs. The CONTRACTOR shall be responsible for repair and replacement of existing amenities to the satisfaction of the DISTRICT. The CONTRACTOR shall protect all vegetation, habitats, structures, and amenities within the limits of the WORK as indicated on the Plans.

3.03 GRUBBING:

- A. Grub (remove) from within limits of excavations, fills, borrow areas, and canals and ditches to be filled all stumps, roots, root mats, logs, and other organic matter and debris encountered.
- B. Remove all irrigation and drainage piping and other man-made and unsuitable materials encountered from within the footprints of the proposed embankments and borrow areas.
- C. Remove all woody debris that measures over one-half inch in diameter.

3.04 TOPSOIL STRIPPING:

- A. Strip topsoil to a nominal depth of 8 inches in the areas of proposed embankments and borrow areas.
 - 1. Remove heavy growths of grass before stripping.
 - 2. Clear and grub area before stripping topsoil.
 - 3. Separate topsoil from underlying subsoil or objectionable material.
- B. Stockpile topsoil in areas approved by the DISTRICT. All topsoil shall be disposed within the limits of construction in areas approved by the DISTRICT. Construct storage piles to freely drain surface water.
- C. Remove organic muck material (if any) from within the footprints of proposed embankments, excavations and in borrow areas.

3.05 REMOVAL AND DISPOSAL OF WASTE MATERIALS:

- A. The CONTRACTOR may burn woody vegetation from the clearing and grubbing operations on the site with the written approval of the DISTRICT and with permission of the local authorities. The CONTRACTOR shall comply with all local ordinances or regulations for burn locations and methods, including methods for preventing uncontrolled spread of the burn. The CONTRACTOR shall provide the DISTRICT with copies of permits prior to burning.
- B. The CONTRACTOR may not burn cleared materials within the limits of any utility right-of-way without written permission of the controlling agency. The CONTRACTOR will be required to collect and haul all cleared materials to an approved site for burning and disposal.
- C. The CONTRACTOR shall dispose of all non-combustible materials, legally, off site.

- D. Previous soil contamination surveys detected areas within the future reservoir limits that were contaminated with copper. These areas are delineated on the drawings. These areas are outside the pre-load work areas of this contract. These areas are being mitigated by others. In the event contaminated soils are suspected or detected during the execution of this contract the CONTRACTOR shall notify the DISTRICT immediately. The DISTRICT will conduct a contamination survey and have any contaminated soils mitigated by others. Do not disturb any suspected or detected contaminated soils without direction from the DISTRICT.

END OF SECTION

SECTION 02114 TREE REMOVAL

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall furnish all labor, material, equipment and perform all work in strict accordance with the Specifications, Contract, and applicable requirements for the removal and disposal of trees and heavy brush. Note that the citrus trees have been removed by others. Remnants of the citrus trees may be encountered during construction.
- B. The CONTRACTOR shall accomplish the complete removal of all trees within the limits of clearing and grubbing, the disposal of resulting waste and debris, as well as any other rubbish, solid waste or debris existing and exposed during the execution of the WORK in those areas described. The CONTRACTOR shall perform the WORK in accordance with recognized and approved principles of modern arboricultural methods. The CONTRACTOR shall perform all WORK without damage to trees, shrubs, and/or facilities that are intended to remain in the work area.
- C. The CONTRACTOR shall perform the WORK which involves the following procedures:
 - 1. Removal of all trees and brush.
 - 2. Burning of removed trees, brush and woody vegetation.
 - 3. Minimizing disturbance of the canal banks and other facilities and in accordance with USFWS Biological Opinion granted for the Project.
 - 4. Removal and disposal of debris/rubbish/solid waste materials cleared and grubbed but not burned.
 - 5. Site cleanup.
- D. If required by the DISTRICT, the CONTRACTOR shall comply with all citrus canker eradication protocol as described in SECTION 02436 – ENVIRONMENTAL PROTECTION.
- E. The CONTRACTOR shall perform the Work in accordance with the Schedule of Work provided in SECTION 01010 – SUMMARY OF WORK and SECTION 01310 – COST LOADED CONSTRUCTION SCHEDULES of the Technical Specifications.
- F. The CONTRACTOR shall attend a safety and reliability briefing with Florida Power & Light (FPL) prior to commencing of tree clearing activities. The CONTRACTOR is responsible for contacting FPL and coordinating the briefing. The initial DISTRICT point of contact prior to contacting FPL is:

Mr. Eric Walther
239-332-9168
e-mail address: eric.walther@fpl.com
- G. The CONTRACTOR and all construction personnel shall attend a T&E Educational training that will be provided by the DISTRICT staff.

1.02 APPLICABLE PUBLICATIONS:

- A. American National Standards Institute (ANSI)
 - 1. (ANSI) Z133.1a: “Safety Requirements for Tree Care Operations - Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush”
 - 2. (ANSI) Z133.1: “Tree Care Operations - Pruning, Trimming, Repairing, Maintaining and Removing Trees, and for Cutting Brush”
 - 3. (ANSI) A300: “Tree Care Operations B Tree, Shrub and Other Woody Plant Maintenance”

- B. Florida Department of Agriculture & Consumer Services, Division of Forestry, “Tree Protection Manual for Builders and Developers”
- C. Florida Statute Chapter 487, “Florida Pesticide Laws”
- D. Occupational Safety and Health Regulations “29 CFR 1910,” Florida Statute 442 Occupational Safety and Health and other applicable federal, state and local regulations
- E. Florida Department of Transportation (FDOT)
 - 1. Index No. 544 – Landscape Installations
 - 2. Manual on Uniform Traffic Control Devices for Streets and Highways

1.03 DEFINITIONS: (Not Applicable)

1.04 SUBMITTALS:

- A. The CONTRACTOR shall submit as specified in SECTION 01300 - SUBMITTALS the proposed methods and materials for clearing of all woody vegetation and trees, including a schedule indicating specific timeframes per sections/phases of the project and methods to protect trees to remain.
- B. The CONTRACTOR shall obtain all necessary permits to accomplish all of the WORK and provide copies of the permits.
- C. The CONTRACTOR is responsible for performing all WORK in accordance with all applicable regulations, ordinances and code requirements from the appropriate city, county, state and/or federal jurisdiction the Project is located in. Work shall be conducted, and shall result in construction of the improvements of this Project, in full accordance with the conditions of the permits, and USFWS Biological Opinion granted for the project.

1.04 QUALIFICATIONS: (Not Applicable)

1.05 RESPONSIBILITIES: (Not Applicable)

1.06 CERTIFICATIONS AND TESTING: (Not Applicable)

1.07 INSPECTION COORDINATION: The CONTRACTOR shall provide access to the WORK for the DISTRICT as requested for inspection. The CONTRACTOR shall provide 48 hours notice of its intention to begin new WORK activities.

1.08 WARRANTY: (Not Applicable)

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.01 TREE REMOVAL:

- A. The CONTRACTOR shall accomplish the removal of trees and or all woody vegetation in a safe and acceptable manner by means of equipment designed for this purpose in conformance with ANSI Standards, A300, Z133.1 and Z133.1a. All other debris, trees and wood growth shall be removed. The CONTRACTOR shall accomplish the WORK of Tree Removal as outlined below.

3.02 CLEARING:

- A. The CONTRACTOR is responsible for coordinating with FPL and obtain any permits or permission as necessary.

- B. The CONTRACTOR shall not interfere with the operations of any irrigation facilities including, but not limited to, pump stations, culverts, valves, canals and ditches. This does not apply to the drip irrigation pipe.
- C. Work shall be conducted, in full accordance with the conditions of the permits, and USFWS Biological Opinion granted for the Project.

3.03 SITE CONDITIONS:

- A. The work site shall be kept clean and free of trash, litter or rubbish exposed during the CONTRACTOR'S tree removal services.
- B. The CONTRACTOR shall be responsible for monitoring the site for Eastern Indigo Snakes and Gopher Tortoises prior to clearing activities.
- C. The CONTRACTOR shall be responsible for restoring and grading any access roads that have deteriorated as a result of the Work.

3.04 EQUIPMENT:

- A. The CONTRACTOR shall provide equipment in good repair and operating condition at all times. Only equipment designed for performance of WORK described herein will be acceptable for operation. All equipment shall meet all safety requirements as established for this type of WORK. Equipment shall be operated and maintained in accordance with MANUFACTURER's recommendations. Equipment shall have the appropriate safety guards, which shall not be removed (e.g., chain saws, chippers, etc.).
- B. The CONTRACTOR will be required to have available on site and in good working condition a minimum of the following:
 - 1. Sufficient traffic control devices to safely control traffic through WORK areas in accordance with the "Manual on Uniform Traffic Control Devices for Streets and Highways" and Florida Department of Transportation requirements
- C. It shall be the responsibility of the CONTRACTOR to verify the location of all utilities, structures, etc., by hand excavation or other appropriate measures before performing any work that could result in damage or injury to persons, utilities, structures or property. The CONTRACTOR shall make a thorough search of the site for utilities, structures, etc., before work is commenced in any particular location.
- D. The CONTRACTOR shall not purposefully disrupt or disconnect any type of utility, electric or irrigation service without first obtaining the written permission of the DISTRICT. Requests for disconnection must be in writing and received by the DISTRICT at least seven (7) calendar days prior to the time of the requested interruption.
- E. The CONTRACTOR shall take within two (2) hours and complete within 48 hours the necessary steps to repair, replace, or restore all services to any utilities or other facilities, which are disrupted due to his or her operations.
- F. Should utilities, structures, etc., be encountered that interfere with the work and are not shown on the Drawings; the CONTRACTOR shall notify the DISTRICT immediately.
- G. If during tree clearing activities, there is damage to the internal grove roads or main roads adjacent to the parcels, the CONTRACTOR is responsible for the repair of the roads to their pre-construction condition.

END OF SECTION

SECTION 02435 TURBIDITY CONTROL AND MONITORING

PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall furnish all necessary equipment, labor and materials and utilize appropriate means and methods of turbidity controls necessary and sufficient to ensure that the more restrictive and protective of the following are achieved at all times: (1) all applicable State water quality standards, as prescribed in Chapter 62-302.530, Florida Administrative Code (F.A.C.), incorporated by reference, (2) all applicable environmental permit conditions, as prescribed in the permits appended to the Contract, and (3) all stormwater and erosion control shall be in accordance with the Florida Department of Environmental Protection (FDEP) Florida Stormwater Erosion and Sedimentation Control Inspector's Manual.
- B. Related Work Specified Elsewhere:
 - 1. SECTION 01300 – SUBMITTALS

1.02 APPLICABLE STANDARDS AND PUBLICATIONS:

- A. Standards or Codes: The edition of the standards or codes of the organizations listed below in effect at the time of the advertisement for bids form a part of this SECTION to the extent referenced.
- B. The environmental protection rules and standards in the applicable sections of the Florida Administrative Code (F.A.C.) incorporated herein by reference are:
 - 1. <http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm>.
 - 2. Design and Performance Standards - 62-25.025 F.A.C.
 - 3. Quality Assurance - 62-160 F.A.C.
 - 4. Surface Waters of the State - 62-301 F.A.C.
 - 5. Surface Water Quality Standards - 62-302 F.A.C.
 - 6. Generic Permits - 62-621.300(2)&(4) F.A.C.
- C. Florida Department of Environmental Protection (FDEP)
 - 1. Florida Stormwater Erosion and Sedimentation Control Inspector's Manual
 - 2. FDEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities
- D. Florida Department of Transportation (FDOT)
 - 1. Standard Specification for Road and Bridge Construction - Sections 104-1, 2, 3, 4, 6 and 7
 - 2. FDOT Index 102, FDOT Index 103

1.03 SUBMITTALS:

- A. The CONTRACTOR shall make submittals for the erosion control, turbidity control and monitoring system in accordance with 01300 and the requirements herein.
- B. The CONTRACTOR shall submit an Erosion and Control Plan indicating proposed silt fences, etc. The CONTRACTOR may use the Contract Drawings as a basis for its submittal; however CONTRACTOR's Qualified Stormwater Management Inspector shall develop, review and sign the submittal drawings.
- C. Provide details of the turbidity controls proposed.

1.04 QUALIFICATIONS:

- A. The CONTRACTOR shall have at least one (1) employee, on-site, certified by the Florida Department of Environmental Protection as a Stormwater Erosion and Sedimentation Control Inspector. The certification shall be submitted to the DISTRICT for review prior to the installation, inspection, maintenance, repair or replacement of any erosion or sedimentation control Best Management Practices, including but not limited to the turbidity controls. The turbidity monitoring shall be conducted according to the FDEP-approved procedures.

1.05 INSPECTION COORDINATION:

- A. The CONTRACTOR shall provide access to the WORK for the DISTRICT as requested for inspection. The CONTRACTOR shall provide at least 48 hours advance notice of its intention to begin new WORK activities.

PART 2 - PRODUCTS

2.01 SILT FENCE:

- A. Use a geotextile fabric made from woven or nonwoven fabric, meeting the physical requirements of Section 985 according to those applications for erosion control. Choose the type and size of posts, wire mesh reinforcement (if required), and method of installation. Do not use products which have a separate layer of plastic mesh or netting. Provide a durable and effective silt fence that controls sediment comparable to the Design Standards and the Erosion & Sediment Control Manual.

PART 3 - EXECUTION

3.01 SILT FENCE:

- A. The CONTRACTOR shall install and maintain the silt fences as required by regulatory authorities and where necessary to maintain turbidity releases at or below the permit compliance levels. Erect silt fence at upland locations, across ditch lines and at temporary locations shown in the Plans or approved by the DISTRICT where continuous construction activities change the natural contour and drainage runoff. Do not attach silt fence to existing trees unless approved by the DISTRICT. Silt fences shall be installed prior to any backfilling, clearing and grubbing, dredging, or excavation and maintained in place until construction is complete and turbidity from construction has dissipated.
- B. The CONTRACTOR shall keep in place and maintain all barriers until the WORK is complete (construction areas stabilized with vegetation). Upon completion of use, the CONTRACTOR shall remove the silt fence and associated items to an off-site location at its own expense.
- C. The CONTRACTOR shall conduct its operations at all times in a manner that minimizes turbidity. The CONTRACTOR is required to conform to the State Water Quality standards as prescribed in Chapter 62-302.530, F.A.C., and to meet the special requirements of any environmental permits that have been issued.
- D. The erosion controls shall be inspected by the CONTRACTOR every work day, after every rainfall event of 0.5 inches or greater in a 24 hour period, and after every extreme weather event that could dislodge or damage the erosion controls, to assure that the controls remain properly installed, undamaged, and fully functional at all times.

3.02 EROSION CONTROL:

- A. The CONTRACTOR shall prevent and control erosion, sedimentation and water pollution as per the Florida Department of Transportation (FDOT) Specification Sections 104-1, 2, 3, 4, 6 and 7 and FDEP regulations and permit conditions.

3.03 MONITORING:

- A. The CONTRACTOR shall conduct and record the results of turbidity monitoring appropriate to the

conditions and at the locations, times, and frequencies specified below. An FDEP approved Turbidity Monitoring Log is attached (Appendix A) for the CONTRACTOR's use.

1. Background Monitoring Location: At least 100 feet (or as specified in the applicable environmental permit) upstream of any construction activities that may generate turbidity within a canal or conveyance feature outside the construction area, in the middle of the canal, at mid-depth in the water column, and outside of any visible turbidity plume.
 2. Compliance Monitoring Location: Located in the canal or water body adjacent to each WORK area, downstream or radial to the construction or maintenance work area, and within the densest portion of any visible plume.
 3. Equipment: The turbidity monitoring equipment shall meet the specifications and be calibrated, maintained, repaired, and replaced according to the methods, procedures, and frequencies set forth in Chapter 62-160, F.A.C.
 4. Records Management: The individual conducting the turbidity monitoring shall transcribe the readings to the approved Daily Turbidity Monitoring Log form (Appendix A) and sign and date the form at the close of each monitoring day. The notebook containing the signed and dated daily turbidity monitoring log forms shall be accessible at the construction Site during the work day.
- B. The CONTRACTOR shall submit the quarterly monitoring data (Turbidity Monitoring Log forms), to the DISTRICT. Documents submitted shall contain the following information:
1. Permit number
 2. Project name
 3. Dates of sampling and analysis
 4. A statement describing the methods used in collection, handling, storage and analysis of the samples
 5. A map indicating the sampling locations
 6. A statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.
- C. The CONTRACTOR shall submit monitoring reports that also include the following information for each sample that is taken:
1. Date and time of the day samples were taken
 2. Depth of the water body
 3. Depth of the sample
 4. Antecedent weather conditions
 5. Water level stage
 6. Direction of flow

3.04 EXCEEDANCES OF WATER QUALITY STANDARDS

- A. If at any time, monitoring reveals the turbidity level, at the compliance sampling station is greater than 29 NTUs above the corresponding background sample in Class I or III receiving waters or greater than 0 NTU above background samples in receiving waters classified as OFW (Outstanding Florida Waters), construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to an acceptable level. Turbidity violations and corrective measures shall be documented in the monitoring reports.

1. The CONTRACTOR must notify the DISTRICT Construction Manager and the DISTRICT's Permitting and Compliance Staff immediately who then, per the permit, must notify the permitting agency of the exceedance. If known, the CONTRACTOR may also contact the DISTRICT's assigned Permitting and Compliance Staff for the Project directly.

END OF SECTION

APPENDIX A

DAILY TURBIDITY MONITORING LOG

**Multiple work areas that may contribute to turbidity in receiving waters must be monitored separately.
A Site map depicting sampling locations must accompany the quarterly turbidity monitoring reports.**

Project Name:	Permit No.:
Collector Name:	Collection Date:
Meter/Sonde Identification No.	

Water Observations	Weather Observations
Water Level Stages	Temperature:
Direction of Flow	Conditions:
Water Depth	

Activity Taking Place During Sampling	Yes	No
Excavation or Filling within 50 ft radius of surface waters or wetlands?		
Please describe:		
Other In-Water Work? (e.g., dewatering; installing piling or forms; injecting concrete; sand blasting; painting)		
Please describe:		
Other Activity? (e.g., materials transfer; washdown; interim stabilization)		
Please describe:		

Turbidity Monitoring Data						
Background Location Description:	Background	Compliance	Background	Compliance	Background	Compliance
Compliance Location Description:	A.M. Mid-Depth		Mid-Day Mid-Depth		P.M. Mid-Depth	
Collection Time						
Analysis Time						
Turbidity (NTU)						
Did Compliance Sample exceed 29 NTU's above Background Sample?	<input type="checkbox"/> Yes* <input type="checkbox"/> No		<input type="checkbox"/> Yes* <input type="checkbox"/> No		<input type="checkbox"/> Yes* <input type="checkbox"/> No	
*If the 29 NTU limitation is exceeded, please describe cause and corrective actions taken on reverse side of this form. Immediately stop activities contributing to turbidity and notify the SFWMD Construction Manager and Permit Compliance Staff.						
Explanation of gaps in sampling activity (e.g., rained out, phased activity, etc.):						
Construction activity complete and slopes stabilized? <input type="checkbox"/> Yes <input type="checkbox"/> No						

Statement of Authenticity	
I certify this test was performed as required by Chapter 62-160, F.A.C., conducted with an approved instrument calibrated in accordance with the appropriate FDEP-SOPs. The results are complete and accurate.	
Print Name:	
Signature:	Date:

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PART 1 - GENERAL

1.01 SCOPE:

- A. Summary of Work: The CONTRACTOR shall provide all labor, equipment and materials necessary for the prevention of environmental damage as the result of construction operations under this Contract and for those measures set forth in other requirements of the Technical Specifications.

1.02 APPLICABLE STANDARDS AND PUBLICATIONS:

- A. Standards or Codes: The edition of the standards or codes of the organizations listed below in effect at the time of the advertisement for bids form a part of this specification to the extent referenced. The CONTRACTOR shall comply with all applicable environmental laws and regulations.
1. Environmental Protection Agency (EPA)
 - a. Clean Air Act (CAA)
 - b. Clean Water Act (CWA)
 - c. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
 - d. Executive Orders and EPA requirements, as appropriate; and all general and specific Federal Permit Conditions as applicable.
 - e. Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)
 - f. National Environmental Laboratory Accreditation Conference (NELAC)
 - g. National Environmental Policy Act (NEPA)
 - h. National Pollution Discharge Elimination System (NPDES)
 - i. Resource Conservation and Recovery Act (RCRA)
 - j. Safe Drinking Water Act
 - k. Toxic Substance Control Act (TSCA)
 2. Code of Federal Regulations (CFR)
 - a. 40 CFR - Parts 109, 261.10, 260-268, 273, 279
 3. Florida Department of Environmental Protection (FDEP)
 - a. Florida Administrative Code (FAC)
 - i. 62-770, 62-780
 - b. Florida Stormwater, Erosion and Sedimentation Control Inspector's Manual
 4. Florida Department of Transportation (FDOT)
 - a. Standard Specification for Road and Bridge Construction - Sections 104-1, 2, 3, 4, 6 and 7
 5. Florida Statutes
 - a. Chapter 403
 6. National Oceanic and Atmospheric Administration (NOAA)
 - a. Coastal Zone Management Act (CZMA)
 7. National Park Service (NPS)
 - a. Native American Graves Protection and Repatriation Act (NAGPRA)
 - b. National Historic Preservation Act (NHPA)
 8. U.S. Army Corps of Engineer (USACE)
 9. U.S. Fish & Wildlife Service (FWS)
 - a. Endangered Species Act (ESA)
 - b. Fish and Wildlife Coordination Act (FWCA)
 - c. Migratory Bird Treaty Act (MBTA)
- B. State and local codes, permits, regulations and ordinances as applicable.

1.03 DEFINITIONS:

- A. For the purpose of this SECTION, environmental damage is defined as the presence of hazardous, physical, or biological elements or agents which alter the physical, chemical or biological integrity of the environment in such a way that it represents an unacceptable risk to public health, safety 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.

1.04 SUBMITTALS: Within 20 calendar days after the Notice to Proceed (NTP), the CONTRACTOR shall submit an Environmental Protection Plan (Plan) for review and acceptance by the DISTRICT in accordance with SECTION 01300. Approval of the Plan shall not relieve the CONTRACTOR of its responsibility for adequate and continuing control of pollutants and appropriate environmental protection measures. Approval of the Plan is conditional and predicated on satisfactory performance during construction. The DISTRICT reserves the right to require the CONTRACTOR to modify the Plan if it is determined that environmental protection requirements are not being met. No physical WORK at the Site shall begin prior to acceptance of the Plan. The Plan shall include, but not be limited to the following:

- A. A list of the Federal, State and Local laws, regulation and permits concerning environmental protection, pollution control and abatement that are applicable to the CONTRACTOR's proposed operations and the requirements imposed.
- B. Methods for protection of features to be preserved within the authorized WORK areas: The CONTRACTOR shall prepare a listing of methods to protect resources needing protection (trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil and historical, archeological and cultural resources).
- C. Procedures to be implemented are to provide all necessary environmental protection and to comply with applicable laws and regulations: The CONTRACTOR shall provide written assurance that immediate corrective action will be taken to correct any environment damage due to accident, natural causes or failure to follow the procedures set out in accordance with the Plan.
- D. The Contractor shall also include into the Environmental Protection Plan the *Educational / Construction Guidelines* that will be provided by the DISTRICT during the Threatened / Endangered Species training for all personnel.
- E. Environmental monitoring plans, if applicable.
- F. Traffic control plan, if applicable.
- G. Drawings showing locations of proposed temporary activities, such as material storage areas or stockpiles of excess spoil or materials.
- H. Erosion and sediment control methods, for protecting surface waters, wetlands, and groundwater during construction. All stormwater and erosion control methods shall be in accordance with the FDEP Florida Stormwater, Erosion and Sedimentation Control Inspector's Manual. The CONTRACTOR shall prevent and control erosion and water pollution as per FDOT Specification Sections 104-1, 2, 3, 4, 6 and 7 and all applicable FDEP regulations and permit conditions.
- I. Spill Prevention Methods: The CONTRACTOR shall identify any hazardous or potentially hazardous substances to be used on the Site and indicate intended actions to prevent accidental or intentional introduction of these materials into the air, ground, water, wetlands or drainage areas. The Plan shall specify the actions that will be taken to meet the federal, state and local laws regarding labeling, storage, removal, transport and disposal of all hazardous or potentially hazardous substances.
- J. Spill Contingency Plan for hazardous, toxic or petroleum material.
- K. A WORK area plan, showing proposed activities and identifying areas of limited use or non-use, and including measures that will be taken for field identification of these areas.
- L. Identification of the person who shall be responsible for implementation of the Plan. This person shall have authority to respond for the CONTRACTOR in all environmental protection matters.

- M. A recycling and waste management plan. The CONTRACTOR shall include waste minimization efforts in the Plan.

1.05 QUALIFICATIONS:

- A. The CONTRACTOR shall provide access to the WORK for the DISTRICT as requested for inspection. The CONTRACTOR shall provide at least 48 hours advance notice of its intention to begin new WORK activities.
- B. When the Gopher Tortoises or Eastern Indigo Snake are identified as a species of concern in the environmental permits the CONTRACTOR shall supply qualified observers during ground clearing activities. Qualified Observers are defined as individuals who have been instructed by the DISTRICT on proper techniques and protocols for protection of the Eastern Indigo Snake and Gopher Tortoise during site activities. The observer's names and documentation showing completion of the DISTRICT's instruction shall be provided to the DISTRICT at least two (2) weeks prior to the commencement of ground clearing activities.

1.06 RESPONSIBILITIES:

- A. Quality Control: The CONTRACTOR shall establish and maintain quality control for the 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 applicable laws, regulations and ordinances, and corrective action(s) taken.
- B. Permits and Authorizations: The CONTRACTOR shall apply for and obtain all necessary permits or licenses unless the DISTRICT has already acquired them. The CONTRACTOR shall be responsible for implementing and complying with all terms, conditions and requirements of all permits issued for construction of the Project. The CONTRACTOR shall install speed limit signs for off-road and improved road travel for construction equipment and employee vehicles that identify speeds protective of wildlife. The CONTRACTOR shall also provide all necessary signage describing all Threatened and/or Endangered species which are identified in applicable environmental permits.
- C. Training: Prior to the onset of construction activities the CONTRACTOR and all personnel shall be trained on how to identify and implement the Standard Protection Measures and Guidelines for the Threatened and Endangered Species and ground-nesting birds. The Standard Protection Measures for the Eastern Indigo Snake dated August 12, 2013, is attached in Appendix C.

1.07 CERTIFICATIONS AND TESTINGS:

- A. All physical, chemical, and biological measurements and analyses that are necessary to comply with the monitoring requirements in all applicable permits or in this Contract must be performed according to approved methods and procedures by a commercial laboratory that is certified to perform the required analyses according to the approved methods and procedures by the National Environmental Laboratory Accreditation Conference (NELAC).

1.08 INSPECTION COORDINATION:

- A. The CONTRACTOR shall provide access to the WORK for the DISTRICT as requested for inspection. The CONTRACTOR shall provide to the DISTRICT at least 48 hours advance notice of its intention to begin new WORK activities.

PART 2 - PRODUCT (ENVIRONMENTAL PROTECTION PLAN)

2.01 NOTIFICATION:

- A. In the event that the DISTRICT notifies the CONTRACTOR of any non-compliance with federal, state or local laws, permits or other elements of the CONTRACTOR's Environmental Protection Plan, the CONTRACTOR shall without delay inform the DISTRICT of the proposed correction action and take such action as approved.
- A. The CONTRACTOR shall notify the DISTRICT immediately of any warnings or notices of noncompliance, fines, citations or tickets issued directly to the CONTRACTOR by any federal, state, or local environmental protection, waste management, code enforcement, or fire, police, or public health agency.
- B. If the CONTRACTOR fails to comply, the DISTRICT may order all WORK to cease until corrective action has been taken. No time extensions shall be granted or damages allowed for the suspension of WORK under this circumstance.

- C. A Notice of Termination (NOT) shall be sent to the applicable federal, state, and local permit-issuing authorities with a copy to the DISTRICT within fourteen (14) days of final stabilization

2.02 SUMMARY:

- A. The CONTRACTOR shall submit a written report within 30 days of completion of the Project. This report shall delineate the absence, or occurrence, of reported or unreported environmental incidents during the course of the Project and include the permit checklists.

2.03 TRAINING:

- A. The CONTRACTOR shall train its personnel in relevant phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, and careful installation and monitoring of the Project to ensure continuous environmental pollution control.
- B. Due to the probability that wildlife species of concern, including but not limited to Threatened and/or Endangered species and Protected Migratory Bird species may be present within or adjacent to construction sites, prior to initiation of construction activities, the CONTRACTOR(s) will be trained by the DISTRICT and/or U.S. Fish & Wildlife Service on how to identify and implement appropriate protection measures for each species.

PART 3 - EXECUTION (PROTECTION OF ENVIRONMENTAL RESOURCES)

3.01 GENERAL:

- A. During the entire period of the Contract, the CONTRACTOR shall protect environmental resources within the Project boundaries and those affected outside the limits of construction. The CONTRACTOR shall confine its activities to the areas defined by the Drawings and specifications. Any deviations from the Drawings including, but not limited to borrow areas, disposal areas, staging areas, and alternate access routes will require additional review by the DISTRICT to ensure compliance with applicable environmental rules and regulations prior to implementation/or commencement of those deviations.

3.02 PROTECTION OF LAND RESOURCES:

- A. Prior to the beginning of any construction the CONTRACTOR shall delineate, install protection and be responsible for preservation of all land resources that are to be preserved or avoided within the WORK area. The CONTRACTOR shall not remove, cut, deface, injure, or destroy any land resources (trees, shrubs, vines, grasses, topsoil, or land forms) unless indicated in the Drawings or specifically authorized by the DISTRICT. All damaged areas shall be restored to original or better condition, to the satisfaction to the DISTRICT.

3.03 DISTURBED AREAS:

- A. The CONTRACTOR shall effectively prevent erosion and control sedimentation through approved materials and methods as identified in the Environmental Protection Plan. Disturbed areas will include areas of ingress and egress, construction materials storage, staging, washdown areas, and toxic, hazardous, and solid materials/waste storage areas. Disturbed areas shall be temporarily stabilized within seven (7) days of cessation of phased construction activity and permanently stabilized within fourteen (14) days of cessation of all phases of construction activity. Temporary Best Management Practices (BMPs) shall remain in place and in effect until the final Site inspection is complete and Site is certified as stabilized.

3.04 PROTECTION OF WATER RESOURCES:

- A. The CONTRACTOR shall conduct all activities in a manner to avoid pollution of surface water, ground water and wetlands. The CONTRACTOR's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation and turbid discharges. No storage or stockpiling of equipment shall be allowed within any wetland area unless specifically authorized under a permit for the Project.
- B. Water directly derived from construction activities shall not be allowed to directly discharge to water areas, but shall be collected in retention areas to allow settling of suspended materials. The CONTRACTOR shall monitor water quality of dewatering discharge into water bodies or leaving the Site in accordance with applicable environmental permits. All monitoring of any water areas that are affected by construction activities shall be the responsibility of the CONTRACTOR.

3.05 OIL, FUEL AND HAZARDOUS SUBSTANCE SPILL PREVENTION:

- A. The CONTRACTOR shall prepare a spill contingency plan in accordance with 40CFR, Part 109. The CONTRACTOR shall prevent oil, fuel or other hazardous substances from entering the air, ground, drainage, and local bodies of water or wetlands. In the event that a spill occurs, despite design and procedural controls, the CONTRACTOR shall take immediate action to contain and clean up the spill and report the spill immediately to the DISTRICT and to other appropriate federal, state, and local agency contacts. Reportable quantities (greater than 25 gallons) of petroleum-based fluids must be reported within 1 hour to the National Response Center (800-424-8802) and State Warning Point (800-320-0519) if it reaches the waters of the state or, if not, within 24 hrs to State Warning Point. Toxic and hazardous substance spills directly into waters of the state, in any quantity, must be reported immediately to the DISTRICT and those federal and state points of contact listed above.
- B. The CONTRACTOR shall submit a written report to the DISTRICT and to the State of Florida Bureau of Emergency Response providing certification of commitment of manpower, equipment and materials necessary to prevent the spread and effect expeditious cleanup and disposal. This report shall be submitted within 48 hours of the spill event.

3.06 MATERIALS AND WASTE MANAGEMENT:

- A. For sanitary waste management, the CONTRACTOR shall ensure that portable restrooms will be anchored on level ground with at least a 15-foot set-back from water bodies or banks or slopes thereto. For solid waste management, dumpster(s) will either be outfitted with a water-tight cover or be covered with a tarpaulin when not in use to minimize infiltration and leaching of rain with at least a 15-foot set-back from water bodies, conveyances thereto, or banks or slopes thereto. Hazardous materials storage areas and liquid refuse and hazardous waste collection and storage areas shall be denoted on the Plan.
- B. The CONTRACTOR shall ensure toxic substances and hazardous materials are stored in a locked, blast-resistant shed anchored to a bermed concrete or asphalt pad on level ground with at least a 15-foot setback from any water bodies, conveyances thereto, or banks or slopes thereto.
- C. For solid and/or hazardous waste disposal involving lead-based paint, the CONTRACTOR shall ensure containers with Toxicity Characteristic Leaching Procedure – Tetraphenylborate (TCLP TPb) concentrations in excess of the Resource Conservation and Recovery Act (RCRA) action level will be transported by a licensed hazardous waste hauler to a licensed hazardous waste disposal facility within the time limit appropriate to the generation rate and accumulated volume of hazardous waste material. Containers with TCLP TPb concentrations less than the RCRA action level shall be transported by a licensed solid waste hauler to a licensed Class I solid waste disposal facility. In either case, the CONTRACTOR shall obtain and transmit signed and dated copies of the transport and disposal manifests to the DISTRICT's for records retention.
- D. The CONTRACTOR is prohibited from the on-site burning of hazardous wastes (aerosol cans, oil filters, etc.). All hazardous wastes shall be disposed of as required by law. Copies of relevant Material Safety Data Sheets (MSDSs) shall be appended to the Environmental Protection Plan, Safety Plan, Spill Prevention Plan, and Stormwater Pollution Prevention Plan (SWPPP).
- E. The CONTRACTOR is responsible for the materials and processes where wastes may be generated under the contracted activities. The CONTRACTOR is responsible for providing the materials in order to implement the Contract and is responsible for operating and maintaining any processes from which waste material may be generated.
- F. The CONTRACTOR is deemed to be the "generator" as defined in 40 CFR 261.10 for any hazardous wastes or spill residue that is generated during the activities encompassed in this Contract. It is recognized that it is the CONTRACTOR's or a subcontractor of the CONTRACTOR whose act first causes a hazardous waste to become subject to regulation. The CONTRACTOR is a different legal entity from the owner/operator of the physical location/property where the contracted activities will be conducted. CONTRACTOR is a "person" within the meaning of Section 403.031(5), Florida Statutes.
- G. The CONTRACTOR is responsible for compliance with applicable standards of 40 CFR 260-268 and 40 CFR 273 and 279 and state regulations which adopt or reference these federal standards.
- H. The CONTRACTOR is responsible for the generation and retention of records associated with waste management practices and disposition. All records shall be maintained for a minimum of three (3) years from the date of generation. All records will be made available to the DISTRICT or regulatory agencies upon request.

- I. In the event of any chemical discharges associated with CONTRACTOR's or subcontractor's activities, CONTRACTOR shall be responsible for reporting, assessment and remediation of such discharges in accordance with applicable federal, state or local regulations and/or guidelines including, but not limited to, 40 CFR 264/265, Chapter 62-770, Florida Administrative Code (F.A.C.) and Chapter 62-780, F.A.C.

3.07 FISH AND WILDLIFE RESOURCE PROTECTION: The CONTRACTOR shall control and minimize interference with, disturbance to, and damage of fish and wildlife resources.

- A. If adverse impacts occur to fish and wildlife species of concern, including but not limited to Threatened and/or Endangered Species and Protected Migratory Bird Species, the CONTRACTOR shall immediately notify the DISTRICT and provide details of adverse impacts for determination of further action that may be required. Adverse impact is defined as any harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, collecting, or attempting to engage in any such activity. Threatened and/or Endangered Species that require specific protection measures as identified in the environmental permits shall be listed in the Environmental Protection Plan.
- B. In the event that the DISTRICT determines that an adverse impact to species of concern, including but not limited to Threatened and/or Endangered Species and Protected Migratory Bird Species occur as a result of the construction activities, the DISTRICT shall notify the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service for determination of further action and possibly to determine if seasonal or daily timing restrictions on construction activities is needed. The CONTRACTOR shall be aware that the Florida Panther, Crested Caracara, Eastern Indigo Snake, and Gopher Tortoise, are known to inhabit the Project site; and the site is in the potential habitat zone for the Florida Bonneted Bat.
- C. The CONTRACTOR and all personnel shall be familiar with the Plan shall be able to identify the threatened and endangered species listed in the Plan. Any activity observed by the CONTRACTOR that may result in adverse impact to threatened or endangered species shall be reported immediately to the DISTRICT, who shall have sole authority for any WORK stoppages, creation of a buffer area, or restart of construction activities.
- D. Any Threatened and/or Endangered Species and species of concern observed at the Site will be recorded and logged. The logs shall be provided to the DISTRICT on a bi-weekly basis. See attached Wildlife Log, Appendix A. If nesting activity is detected within and/or adjacent to the Site, the CONTRACTOR shall immediately contact the DISTRICT for determination of further action and possibly to determine if seasonal or daily timing restrictions on construction activities is needed.
- E. The CONTRACTOR shall keep construction activities under surveillance, management, and control to prevent impacts to migratory birds and their nests. The CONTRACTOR may be held responsible for harming or harassing the birds, their eggs or their nests as a result of the construction. Any nesting activity observed by the CONTRACTOR shall be reported immediately to the DISTRICT's Construction Manager who shall have sole authority for any work stoppages, creation of the buffer area, or restart of construction activities.
- F. CONTRACTOR is made aware of a maximum speed limit of 25 MPH is strictly enforced for all vehicle access in and around the site. CONTRACTORS violating this provision may be removed from the Project.

3.08 ENVIRONMENTAL PROTECTION RETENTION RECORD RETENTION:

- A. The CONTRACTOR shall retain a copy of all required permits, the Plan, the SWPPP, the Spill Prevention Plan, and all associated reports, records and documentation required by these permits or the Contract at the construction Site or an appropriate alternative location as specified in the Notice of Intent (NOI) from NTP through Notice of Termination (NOT). Such documentation includes but is not limited to soil disturbance and stabilization logs, inspection and corrective action logs, turbidity monitoring logs, wildlife observation logs and reports, TCLP and Synthetic Precipitation Leaching Procedure (SPLP) assay results, sanitary, solid, and hazardous waste transport and disposal manifests, spill reports, material safety data sheets, and any warnings, citations or notices of noncompliance, or fees, levees, fines or penalties. A copy of all such records shall be submitted to the DISTRICT at the time of Contract close-out.

3.09 PROTECTION OF AIR RESOURCES:

- A. The CONTRACTOR shall minimize pollution of air resources. All activities, equipment, processes and work operated or performed in accomplishing the specified construction shall be in strict accordance with the applicable air pollution standards of the State of Florida (F.S. Chapter 403 – Environmental Control and F.A.C. Section 200 – Recirculation Chiller) and all Federal emission and performance laws and standards as applicable.

This includes, but is not limited to, control of particulates, dust generated by or incidental to construction activities, burning and odors.

3.10 PRESERVATION AND RECOVERY OF HISTORIC, ARCHEOLOGICAL, AND CULTURAL RESOURCES: If applicable, known historic, archeological and cultural resources within the CONTRACTOR's WORK area(s) will be designated as a "Sensitive Environmental Area" on the 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.

- A. Inadvertent Discoveries: If, during construction or other activities, the CONTRACTOR observes items that may have historic or archeological value, such observations shall be reported immediately to the DISTRICT so that the appropriate staff may be notified and a determination made 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.
- B. 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 DISTRICT.

END OF SECTION

Appendix A Wildlife Log

For Threatened and/or Endangered Species and Species of Concern Listed in Permit

Wood Storks Sightings, since they are so abundant, will be logged on a bi-weekly basis in coordination with Bi-weekly Construction Progress Meetings and will be reported quarterly along with other sightings.

<input type="checkbox"/> Eastern Indigo Snake	<input type="checkbox"/> Bald Eagle	<input type="checkbox"/> Wood Stork	<input type="checkbox"/> Florida Panther
<input type="checkbox"/> Caracara	<input type="checkbox"/> Gopher Tortoise	<input type="checkbox"/> Other _____	
Project Name			
Date of Sighting			
Time of Sighting			
Temperature			
Wind (mph)			
Weather Conditions (ex: note sky cover, raining, humid, cloudy, sunny, cool, hot, etc)			
Construction Activity Occurring			
Equipment being Used			
Condition of Animal (ex: injured, unharmed, etc)			
Behavior of Animal (ex: disoriented, aggressive, etc)			
Actions taken after sighting			
Size of Animal			
GPS Coordinates/Specific Location			
Pictures Taken (Attach pictures)			
Date this form was completed			
Observers Company/Agency			
Observers Name	Print Name:		
	Signature:		
Observers Contact Info	Office:		
	Cell:		
	Email:		

EXAMPLE FORM Wildlife Log

For Threatened and/or Endangered Species and Species of Concern Listed in Permit

Wood Storks Sightings, since they are so abundant, will be logged on a bi-weekly basis in coordination with Bi-weekly Construction Progress Meetings and will be reported quarterly along with other sightings.

<input checked="" type="checkbox"/> Eastern Indigo Snake <input type="checkbox"/> Bald Eagle <input type="checkbox"/> Wood Stork <input type="checkbox"/> Florida Panther <input type="checkbox"/> Caracara <input type="checkbox"/> Gopher Tortoise <input type="checkbox"/> Other	
Project Name	C-44 Reservoir
Date of Sighting	Tuesday, January 29, 2008
Time of Sighting	0900
Temperature	75°
Wind (mph)	5-10 mph
Weather Conditions (ex: note sky cover, raining, windy, humid, cloudy, sunny, cool, hot, etc)	Partial cloud/Sunny
Construction Activity Occurring	Demobilization of Construction Trailers, nothing near the area snakes were sighted
Equipment being Used	n/a
Condition of Animal (ex: injured, unharmed, etc)	Good
Behavior of Animal (ex: disoriented, aggressive, etc)	under a door in an abandoned citrus office
Actions taken after sighting	Determined sex, took photos, estimated size
Size of Animal	Approx 6'
GPS Coordinates/Specific Location	N 27 05 33.59 W 80 26 59.90 NE Corner of Project along Eastern Levee
Pictures Taken (Attach pictures)	Yes, attached
Date this form was completed	Tuesday, February 5, 2008
Observers Company/Agency	Land Clearing Inc.
Observers Name	Print Name:
	Signature:
Observers Contact Info	Office:
	Cell:
	Email:



Appendix B

Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

LEGAL STATUS: The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.



August 12, 2013

ATTENTION:

**THREATENED EASTERN INDIGO
SNAKES MAY BE PRESENT ON
THIS SITE!!!**



Please read the following information provided by the U.S. Fish and Wildlife Service to become familiar with standard protection measures for the eastern indigo snake.

**IF YOU SEE A LIVE EASTERN
INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the eastern indigo snake sufficient time to move away from the site without interference.
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate U.S. Fish and Wildlife Service (USFWS) office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN
INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**USFWS Florida Field Offices to be
contacted if a live or dead eastern indigo
snake is encountered:**

North Florida ES Office – (904) 731-3336
Panama City ES Office – (850) 769-0552
South Florida ES Office – (772) 562-3909

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

SIMILAR SNAKES: The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

Appendix C
STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013



ATTENTION:
THREATENED EASTERN
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- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

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Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law.

DESCRIPTION:	The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.
SIMILAR SNAKES:	The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.
LIFE HISTORY:	The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.
PROTECTION:	The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. "Taking" of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. "Take" is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

August 12, 2013

PART 1 - GENERAL

1.01 SUMMARY:

- A. The WORK covered by this SECTION consists of furnishing all the necessary equipment, materials and labor associated with the establishment and maintenance of grass in all areas subject to erosion as result of the CONTRACTOR'S activities. These include, but are not limited to seeding, mulching and fertilizing newly grassed areas and maintenance.

1.02 SUBMITTALS:

- A. Certificates:
1. Seed and fertilizer shall be certified that they meet requirements of these specifications, stating botanical name, percentage by weight, percentage of purity, germination, and weed seed for each grass seed species.

1.03 WARRANTY:

- A. The CONTRACTOR shall warrant the WORK against defects for one (1) year from the date of Substantial Completion and as described in Article 13 of Section 00700 - General Terms and Conditions.

PART 2 - MATERIALS:

2.01 GRASS SEED:

- A. Provide fresh, clean, new crop seed complying with tolerance for purity and germination established by Official Seed Analysts of North America and as required below.
- B. Seed shall be labeled according to the U.S. Department of Agriculture Federal Seed Act and shall be furnished in containers with tags showing seed mixture, purity, germination, weed content, name of seller, and date on which seed was tested.

1. Seed Mixtures: Meet the following minimum weight of pure live seed per acre:

Seed Name	Pounds Pure Live Seed
Argentine Bahia	41
Bermudagrass	14
Brown Top Millet	21

NOTE: Pure live seed (PLS) is determined by multiplying the % pure seed by the % germination. Therefore, if the pure seed is 80% and the germination is 70% the PLS is .80 X .70 or 56%. At 56% it would take 53.5 pounds to equal 30 pounds of PLS.

2. Moldy seed or seed that has been damaged in storage will not be accepted.
3. When seasonal conditions mandate, substitute a winter grass such as rye grass for the brown top millet.

2.02 FERTILIZER:

- A. Commercial fertilizer shall be Ammonium Sulfate (21-0-0-24S) containing 21 percent nitrogen and 24 percent sulfur. Fertilizer containing phosphorus is not acceptable.
- B. Deliver to site in unopened, labeled bags or containers.

2.03 MULCH:

- A. Vegetative Anti-Erosion Mulch: Seed free, salt hay, rye or oats, or of pangola, peanut, coastal Bermuda or Bahia grass hay.
- B. Only undeteriorated mulch that can readily be cut into the soil shall be used.
- C. Green mulch will not be accepted.

PART 3 - EXECUTION

3.01 SOIL PREPARATION:

- A. Any growth, rocks, or other obstructions which might interfere with tilling, seeding, or later maintenance operations shall be removed and disposed of properly. Remove stones over two (2) inches in any dimension and sticks, roots, rubbish and other extraneous matter.
- B. Areas to be seeded are to be graded to a smooth, even surface with loose, uniformly fine texture. Roll and rake, remove ridges and fill depressions, to meet finish grades. Limit fine grading to areas which can be planted within immediate future.
- C. Moisten prepared areas before planting if soil is dry. Water thoroughly and allow surface to dry before planting.
- D. If prepared areas are eroded or otherwise disturbed after fine grading and prior to planting they shall be restored to specified condition prior to planting.
- E. Immediately upon completion of construction, grass shall be planted in all disturbed areas and as designated in the drawings. Method of planting shall be dry seeding.

3.02 FERTILIZING:

- A. Apply fertilizer in accordance with MANUFACTURER's recommendations.
- B. Incorporate fertilizer into the soil to a depth of at least two (2) inches by discing, harrowing or raking, except on slopes steeper than two (2) horizontal to one (1) vertical.

3.03 SEEDING:

- A. Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.
- B. Do not seed when wind velocity exceeds five (5) miles per hour. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other.
- C. Sow not less than a rate of 76 pounds of pure live seed per acre.
- D. Rake seed lightly into top 1/8-inch of soil, roll lightly, and water with fine spray.
- E. Methods of Application:
 - 1. Dry Seeding: Spreader or seeding machine.

3.04 MULCHING:

- A. Apply a mulch covering to all seeded areas.
- B. Apply vegetative mulch to loose depth of two (2) inches, by means of a mechanical spreader or other approved methods.
- C. Mulch material shall be cut into the soil so as to produce a loose-mulched thickness of three to four inches. The use of harrows will not be permitted.

- D. Immediately following the application of the mulch, water the seeded area in one watering, in sufficient amount to penetrate the seedbed to a minimum depth of two (2) inches. Perform so as not to cause erosion or damage to the seeded surface.
- E. Protect seeded areas against hot, dry weather or drying winds by applying mulch not more than 24 hours after completion of seeding operations.

3.05 MAINTENANCE:

- A. Perform maintenance until eight (8) weeks after all areas have been seeded.
- B. Requirements:
 - 1. The CONTRACTOR shall water all newly grassed areas a minimum of once a week until satisfactory grass growth is attained.
 - 2. Repair any portion of the seeded surface which becomes gullied or otherwise damaged, or the seeding becomes damaged or destroyed.
 - 3. Replace mulch when washed or blown away.
- C. If, at the end of the 8-week maintenance period, a satisfactory stand of grass has not been produced, renovate and reseed the grass or unsatisfactory portions thereof immediately.
- D. Mowing is not required.

3.06 ACCEPTANCE OF GRASSING:

- A. When grassing work is substantially completed, including maintenance, the DISTRICT will, upon request, make an inspection to determine acceptability.
 - 1. Seeded areas may be inspected for acceptance in parts agreeable to the DISTRICT, provided WORK offered for inspection is complete, including maintenance.
- B. Replant rejected WORK and continue specified maintenance until reinspected by the DISTRICT and found to be acceptable.
 - 1. A satisfactory stand is defined as a grass or section of grass that has:
 - a. No bare spots larger than three (3) square feet.
 - b. Not more than five (5) percent of total area with bare spots larger than six (6) inches.
 - c. Not more than ten (10) percent of total area with bare spots larger than two (2) inches square.
 - 2. If the grassing is still unsatisfactory upon inspection of replanted area, the CONTRACTOR shall sod those areas that are unacceptable. Acceptance of the sodded areas is dependent upon satisfactory coverage criteria established in 3.06.B.1 above.

END OF SECTION