SECTION 02262 STEEL SHEET PILING

PART 1 - GENERAL

1.01 SCOPE:
   A. Summary of Work: The CONTRACTOR shall furnish all labor, materials, and equipment necessary to install all temporary and permanent sheet piling, including wales, tie rods, and bolts, for the structure as indicated on the Drawings and specified herein.

   B. Related Work Specified Elsewhere:

      This list is not intended to be all-inclusive.

      1. SECTION 01300 Submittals

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.

   B. American Society for Testing and Materials (ASTM):

      1. A328 - Standard Specification for Steel Sheet Piling
      2. A572 - Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel
      3. A668 - Standard Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use

   C. American Welding Society (AWS):

      1. AWS D1.1 - Structural Welding Code - Steel

1.03 DEFINITIONS: (Not Used)

1.04 SUBMITTALS:

   A. The CONTRACTOR shall make submittals for Steel Sheet Piling in accordance with SECTION 01300 and the following provisions. The CONTRACTOR shall be responsible for coordination of materials, equipment, and installation regardless if the submittals are made together or separately.

      1. For Temporary Sheet Piles:
         a. The CONTRACTOR shall submit the temporary steel sheet pile design signed and sealed by a Professional Engineer registered in the State of Florida.
         b. Submit fabrication and erection drawings for temporary piling, wales, tie rods, and accessories prior to installation signed and sealed by a Professional Engineer registered in the State of Florida.

      2. For Permanent Sheet Piles:
         a. Materials submission as identified in Part 2 of this SECTION.
         b. Pile driving installation plan.

      3. For Temporary and Permanent Sheet Piles:
         a. Make and model of pile-driving hammer.
b. Weight of capblock assembly, cushion dimensions, type of cushion material, and cushion stiffness.

c. If used materials are proposed by the CONTRACTOR, the CONTRACTOR shall submit detailed photos of all used materials and the location of these materials. The CONTRACTOR shall afford the DISTRICT the opportunity to view all used materials during the standard review period for any submittals associated with that material.

B. During pile driving, the CONTRACTOR shall submit records to the DISTRICT each day including the following for each temporary and permanent sheet pile:

1. Name of structure and pile number
2. Driven pile length
3. Pile length after cut off
4. Pile cut off and tip elevations
5. Ground surface elevation during driving
6. Final driving resistance and pressure gauge readings or hammer stroke
7. Date and time of day pile is driven
8. Heaving or redriving data
9. Remarks concerning pile-driving operations

1.05 QUALIFICATIONS:

A. Experience Requirement:

1. The CONTRACTOR shall have a minimum of five (5) years experience installing steel sheet piles. The CONTRACTOR shall submit documentation of this experience to the DISTRICT.

1.06 RESPONSIBILITIES:

A. The CONTRACTOR shall be responsible for layout of the piles to the location shown on the Drawings.

B. The CONTRACTOR shall establish monitoring devices and benchmarks as required to complete the WORK.

C. The DISTRICT shall provide elevation reference for the CONTRACTOR to mark each pile along its entire length at one (1) foot intervals and along at least the last foot of driving at one (1) inch increments, so as to permit determination of the pile tip elevation and corresponding driving resistances during driving.

1.07 CERTIFICATIONS AND TESTING: (Not Used)

1.08 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-hour advance notice of its intention to begin new WORK activities.

1.09 WARRANTY:

A. The MANUFACTURER shall warrant the EQUIPMENT, MATERIALS and PRODUCTS specified in this SECTION against defective materials and workmanship with the MANUFACTURER’s standard
warranty, but for no less than one (1) year from the date of Substantial Completion, and as described in Article 13 of Section 00700 - General Terms and Conditions.

B. 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 - PRODUCTS

2.01 DRIVEN STEEL SHEET PILES:

A. The CONTRACTOR shall provide Steel Sheet Pile in accordance with the following:
   1. Sheet piles shall have the minimum geometric properties shown on Drawings.
   2. Permanent steel sheet piles shall conform to ASTM A328 and shall be minimum ASTM A572 Grade 50 steel. Use of hot-rolled or cold-rolled sheet piles is permitted.
   3. Steel sheet piles may be provided in “used” condition such that they meet the minimum geometric properties, have minimal superficial corrosion, and meet the minimum material requirements provided in this SECTION. If used sheet piles are utilized, the existing web and flange thicknesses shall be a minimum of 85% of the original mill thickness.
   4. Sheet piles shall not have a camber or sweep in excess of the permitted mill tolerance.
   5. Store on platforms, skids or other supports at the Site and support to prevent excessive deflection.
   6. Sheet pile points shall be reinforced with protector as manufactured by Associated Pile and Fitting Corporation or DISTRICT approved equal. Points shall be welded to the piles in accordance with the MANUFACTURER’s recommendations and conforming to ASW D1.1.

B. The CONTRACTOR shall drive steel sheet piles to the specified elevation.

C. The CONTRACTOR shall provide equipment for driving steel sheet piles as required to complete the WORK and as specified below:
   1. The sheet piles shall be driven with an approved single, partial double-acting or double-acting steam, air, diesel or vibratory hammer.
   2. The pile driving hammer shall be operated at all times at the speeds and conditions recommended by the hammer MANUFACTURER.
   3. The boiler or compressor capacities for the steam or air-operated hammers shall be sufficient to operate the hammer continuously at the full rated speed and energy.
   4. For the steam- or air-operated hammer drivers, the CONTRACTOR shall provide a pressure gauge to be located on the hammer steam or airline in a position such that it can be clearly read by the pile driver operator.
   5. For the double-acting diesel hammers, the CONTRACTOR shall provide a pressure gauge to be located in a position such that it can be clearly read by the pile driver operator.
   6. For a single-acting diesel hammer, the CONTRACTOR shall mark the ram as approved by the DISTRICT to permit determination of the stroke.

D. Capblock and Cushion:
   1. The CONTRACTOR shall submit to the DISTRICT details concerning the stiffness of the capblock and cushion assembly and the coefficient of restitution and weight of the capblock and cushion assembly two (2) weeks prior to driving.
PART 3 - EXECUTION

3.01 DRIVEN SHEET PILES:

A. The CONTRACTOR shall provide pile driving equipment and drive steel sheet piles in accordance with the following:
   1. Templates: A template shall be provided for each location and be constructed to locate the relative position of the proposed piling layout.
   2. Equipment for Driving Steel Sheet Piles:
      a. All pile-driving equipment shall be subject to the DISTRICT's approval after inspection at the job Site.
      b. At any time during the progress of the WORK, equipment, which in the DISTRICT's opinion, is in poor operating condition will not be approved for pile installation.

B. Driving Procedure:
   1. Sheet piles shall not be driven until inspected and approved for driving.
   2. No piles shall be driven within 100 feet of concrete less than seven (7) days old, unless authorized by the DISTRICT.
   3. Drive piles in contact with surrounding soil and leave all permanent piles in place.

C. Tip Elevation:
   1. The sheet piles shall be driven to the tip elevation indicated on the Drawings.

D. Cutoff:
   1. Piles shall be cut off perpendicular to the vertical axis of the pile and to within one half inch of the cutoff elevation indicated.
   2. Remove the portion of the pile cut off from the Site.
   3. If excavation is required to achieve pile cutoff, remove the excess excavated materials as directed by the DISTRICT.
   4. Splicing shall not be permitted without approval of the DISTRICT.

E. Installation Tolerance:
   1. Tolerances in Driving: All piles shall be driven with a variation of not more than one quarter inch per foot of pile length from the vertical for plumb piles. Top of pile shall be within three (3) inches of the location indicated. Manipulation of piles to force them into position will not be permitted. All piles will be checked for heave. Piles found to have heaved shall be redriven to the required point elevation.

F. Predrilling and Jetting:
   1. Predrilling or jetting will not be permitted without written approval from the DISTRICT.

G. Rejected Piles:
   1. The DISTRICT will determine the acceptability of all piles driven and may reject those piles that do not conform to the specifications.
   2. Perform one of the following, as directed by the DISTRICT, for those piles that have been rejected.
      a. Leave the piles in place, cut off as directed and drive one or more new piles in locations designated by the DISTRICT.
b. Withdraw the pile and drive a new pile.

H. Sheet Pile Bracing: Install permanent wales, tie rods and accessories as indicated.
I. Provide temporary bracing as required prior to installation of permanent bracing.

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 for this Project, 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, July 2008 Edition.

1.02  RELATED WORK SPECIFIED ELSEWHERE:

A. SECTION 01300 Submittals
B. SECTION 01530 Temporary Barriers and Controls
C. SECTION 02436 Environmental Protection

1.03  APPLICABLE PUBLICATIONS: The environmental protection rules and standards in the applicable sections of the Florida Administrative Code (F.A.C.) incorporated herein by reference are:

A. http://www.dep.state.fl.us/legal/Rules/rulelistnum.htm
C. Quality Assurance - 62-160 F.A.C.
D. Surface Waters of the State - 62-301 F.A.C.
E. Surface Water Quality Standards - 62-302 F.A.C.
F. Generic Permits - 62-621.300(2)&(4) F.A.C.

1.04  DEFINITIONS: (Not used)

1.05  SUBMITTALS: The CONTRACTOR shall make submittals for the turbidity control and monitoring system in accordance with SECTION 01300 and the requirements herein. This information shall be included in an Erosion and Sediment Control Plan which is part of the Environmental Protection Plan as required in SECTION 02436 Environmental Protection.

A. Provide details of the turbidity controls proposed.
B. Provide proposed layout of turbidity controls and monitoring system on the site plan.
C. Obtain monitoring data and prepare monthly reports in accordance with Paragraph 3.03B.

1.06  QUALIFICATIONS: The CONTRACTOR shall have on-site at least one (1) employee 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 turbidity controls. The turbidity monitoring shall be conducted according to FDEP-approved procedures.
1.07 RESPONSIBILITIES: (Not Used)

1.08 CERTIFICATIONS AND TESTING: (Not Used)

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

1.10 WARRANTY: (Not Used)

PART 2 - PRODUCTS

2.01 FABRIC: The CONTRACTOR shall provide fabric that is flexible and impermeable or of sufficiently fine mesh to prevent passage of suspended material through the fabric. Fabric shall provide not less than 60 inches vertical depth of barrier where existing water depths are six feet or greater. Where existing water depths are less than six feet, the fabric depth may be decreased in 12-inch increments to not less than 12 inches to conform to existing bottom depths.

2.02 FLOATS: The CONTRACTOR shall provide floats for barriers of sufficient buoyancy to prevent the top of the barrier from submerging under any water and wind conditions. If the top of the barrier becomes submerged for any reason, the CONTRACTOR shall suspend construction operations until the condition is corrected.

2.03 ANCHORS AND WEIGHTS: The CONTRACTOR shall provide and maintain an anchor system to secure the barrier in position. Attach weights to the barrier as necessary to keep the fabric at an angle to the vertical of 30 degrees or less. Fabric material shall not be attached to the canal bottom.

PART 3 - EXECUTION

3.01 TURBIDITY BARRIERS:

A. The CONTRACTOR shall install and maintain turbidity barriers as noted in the drawings and where necessary to maintain turbidity releases at or below permit compliance levels. Barriers 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. All barriers shall be adequately marked and appropriate signage erected to identify them as obstructions to navigation.

B. Any rips or tears that occur in the turbidity barrier material during use shall be repaired or replaced immediately by the CONTRACTOR at its expense. Rips or tears that occur in the turbidity barrier material in use that are not repaired or replaced immediately by the CONTRACTOR will result in a suspension of excavation and/or construction operations, and shall require repairs and replacements as a prerequisite to the resumption of work.

C. The CONTRACTOR shall keep in place and maintain all barriers until the WORK is complete (construction areas stabilized with vegetation) and turbidity levels return to background levels based on monitoring results. Upon completion of use, the CONTRACTOR shall remove the turbidity barriers and associated items to an off-site location at its own expense.

D. The CONTRACTOR shall conduct its operations at all times in a manner that minimizes turbidity. The CONTRACTOR is required to conform to 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.
E. Turbidity 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 turbidity controls, to assure that the turbidity controls remain properly installed, undamaged, and fully functional at all times.

3.02 EROSION CONTROL:

A. The CONTRACTOR shall prevent and control erosion and water pollution as per 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 1,000 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. The CONTRACTOR shall submit a map indicating the background monitoring location.

2. Compliance Monitoring Location: At a point no greater than 450 feet downstream (or as specified in the applicable environmental permit) of any construction activities discharge locations that may generate turbidity, in the middle of the canal, in the densest portion of any visible plume, at mid-depth. The CONTRACTOR shall submit a map indicating the compliance monitoring location.

3. Sampling Time:
   a. During Activities or Environmental Conditions that Can Generate Construction-Related Turbidity: Water samples for turbidity measurement shall be collected beginning no sooner than one hour after and no later than two hours after construction activity commences (or as specified in the applicable environmental permit) and every four hours thereafter until the work day ends. Water samples shall be collected at the same time(s) every work day according to this schedule. Any substantial deviation from this schedule must be approved by the DISTRICT, unless otherwise compelled by force majeure, in which case, an explanation must be provided verbally as soon as possible and in writing within 48 hours of the deviation.
   b. During Activities and Conditions That Cannot Generate Construction-Related Turbidity: Once daily at 10:00 AM or as specified in the applicable environmental permit.

4. 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.

5. Records Management: The individual conducting the turbidity monitoring shall transcribe the readings to the approved Turbidity 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 log forms shall be accessible at the construction site during the work day.

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Corrected Final/RTA Submittal
02435-3
May 9, 2014
B. The CONTRACTOR shall submit monthly monitoring data (turbidity 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. Time of day samples taken
2. Depth of water body
3. Depth of 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 levels, 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 acceptable levels. Turbidity violations and corrective measures shall be documented in the monitoring reports.

B. 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 assigned Permitting and Compliance Staff for the Project directly.

END OF SECTION
## 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.

<table>
<thead>
<tr>
<th>Project Name:</th>
<th>Permit No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collector Name:</td>
<td>Collection Date:</td>
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<tr>
<td>Meter/Sonde Identification No.</td>
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<table>
<thead>
<tr>
<th>Water Observations</th>
<th>Weather Observations</th>
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</thead>
<tbody>
<tr>
<td>Water Level Stages</td>
<td>Temperature:</td>
</tr>
<tr>
<td>Direction of Flow</td>
<td>Conditions:</td>
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<tr>
<td>Water Depth</td>
<td></td>
</tr>
</tbody>
</table>

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

### Turbidity Monitoring Data

<table>
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<tr>
<th>Background Location Description:</th>
<th>Background</th>
<th>Compliance</th>
<th>Background</th>
<th>Compliance</th>
<th>Background</th>
<th>Compliance</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>A.M.</td>
<td>Mid-Depth</td>
<td>Mid-Day Mid-Depth</td>
<td>P.M.</td>
<td>Mid-Depth</td>
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<td>Collection Time</td>
<td></td>
<td></td>
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<td>Analysis Time</td>
<td></td>
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<td></td>
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<tr>
<td>Turbidity (NTU)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did Compliance Sample exceed 29 NTU’s above Background Sample?</td>
<td>☐ Yes*</td>
<td>☐ Yes*</td>
<td>☐ Yes*</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<td>☐ No</td>
<td>☐ No</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
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.):

<table>
<thead>
<tr>
<th>Construction activity complete and slopes stabilized?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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: __________________________

Additional Comments:

________________________________________________________________________
________________________________________________________________________
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*Explain turbidity water quality standard exceedance (>29 NTU above background for Class III or > 0 NTU above background for an Outstanding Florida Water (OFW)) and describe corrective actions taken.______________________________________________________________
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SECTION 02436   ENVIRONMENTAL PROTECTION

PART 1 - GENERAL

1.01 SCOPE:

A. Summary of Work: The CONTRACTOR shall provide labor, equipment and materials for the prevention of environmental damage as the result of construction operations under this contract and for those measures set forth in other technical requirements of these specifications.

1.02 APPLICABLE PUBLICATIONS: Numerous environmental laws and regulations may apply. At the federal level, the contractor shall comply with the Clean Water Act (CWA); Clean Air Act (CAA); Safe Drinking Water Act, Coastal Zone Management Act (CZMA); Comprehensive Environmental Response, Compensation and Liability Act (CERCLA); Endangered Species Act (ESA); Fish and Wildlife Coordination Act (FWCA); Migratory Bird Treaty Act (MBTA); National Environmental Policy Act (NEPA); National Pollution Discharge Elimination System (NPDES); National Historic Preservation Act (NHPA); Native American Graves Protection and Repatriation Act (NAGPRA); Resource Conservation and Recovery Act (RCRA); Toxic Substance Control Act (TSCA); Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); Code of Federal Regulations (CFR); Executive Orders and Environmental Protection Agency (EPA) requirements, as appropriate; and all general and specific Federal Permit Conditions as applicable. Additionally, the CONTRACTOR shall comply with state and local codes, permits, regulations and ordinances as applicable.

1.03 DEFINITIONS: For the purpose of this specification, 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 seven (7) calendar days after the Notice to Proceed, the CONTRACTOR shall submit an Environmental Protection Plan for review and acceptance by the DISTRICT. 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 Environmental Protection 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 Environmental Protection Plan. The Environmental Protection 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 the required 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 Environmental Protection Plan.
D. Environmental monitoring plans, if appropriate.

E. Traffic Control Plan, if appropriate.

F. Drawings showing locations of proposed temporary activities, such as material storage areas or stockpiles of excess spoil or materials.

G. Erosion and Sediment Control Plan to include 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, July 2008 Edition. The CONTRACTOR shall prevent and control erosion and water pollution as per FDOT Specification Sections 104-1, 2, 3, 4, 6 and 7 and Florida Department of Environmental Protection (FDEP) regulations and permit conditions. This plan is also known as the Stormwater Pollution Prevention Plan (SWPPP).

H. Spill Prevention Methods: The CONTRACTOR shall identify any hazardous or potentially hazardous substances to be used on the job site and indicate intended actions to prevent accidental or intentional introduction of these materials into the air, ground, water, wetlands or drainage areas. The Spill Prevention 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.

I. Spill Contingency Plan for hazardous, toxic or petroleum material.

J. 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.

K. Identification of the person who shall be responsible for implementation of the Environmental Protection Plan. This person shall have authority to respond for the CONTRACTOR in all environmental protection matters.

L. A Recycling and Waste Management Plan. The CONTRACTOR shall include waste minimization efforts in the Plan.

1.05 QUALIFICATIONS: The Eastern Indigo Snake is identified as a species of concern in the environmental permits. The CONTRACTOR shall supply qualified eastern indigo snake observers during ground clearing activities, and during earth-moving activities, such as, scraping, canal excavation, dredging, grading, or filling. 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 during site activities. The proposed observer’s names and documentation showing completion of DISTRICT instruction shall be provided to DISTRICT’s Construction Manager at least two (2) weeks prior to the commencement of these 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 laws, regulations and ordinances, and corrective action taken.

B. Permits and Authorizations: The CONTRACTOR shall obtain all needed permits or licenses unless the DISTRICT has already acquired them. The CONTRACTOR shall be responsible for implementing the terms and requirements of all permits issued for construction of the project. The CONTRACTOR
shall install 25 miles per hour (MPH) 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 Threatened and/or Endangered species which are identified in applicable environmental permits.

1.07 INSPECTION COORDINATION: 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 - ENVIRONMENTAL PROTECTION PLAN

2.01 NOTIFICATION: 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 inform the DISTRICT of the proposed correction action and take such action as approved.

The CONTRACTOR shall notify the DISTRICT’s Construction Manager 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.

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.

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

2.02 SUMMARY: The CONTRACTOR shall submit a written report within thirty (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. Final Payment will not be made unless this report has been submitted by the CONTRACTOR.

2.03 TRAINING: 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.

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 - PROTECTION OF ENVIRONMENTAL RESOURCES

3.01 GENERAL: 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 plans (borrow areas, disposal areas, staging areas, and alternate access routes) will require additional review by the DISTRICT to ensure compliance with environmental rules and regulations prior to implementation/or commencement of those deviations.

3.02 PROTECTION OF LAND RESOURCES: Prior to the beginning of any construction the CONTRACTOR shall identify all land resources that are to be preserved or avoided within the WORK area.
CONTRACTOR shall not remove, cut, deface, injure, or destroy any land resources (trees, shrubs, vines, grasses, topsoil, or land forms) unless indicated in the plans or specifically authorized by the DISTRICT. All damaged areas shall be restored to original or better condition.

3.03 DISTURBED AREAS: 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 BMPs shall remain in place and in effect until the final site inspection is complete and construction site is certified as stabilized.

3.04 PROTECTION OF WATER RESOURCES: The CONTRACTOR shall conduct all activities in a manner to avoid pollution of surface and 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 permit.

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: 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 (> 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 hours 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.

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 a BMP Site 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 hazardous waste disposal involving lead-based paint, the CONTRACTOR shall ensure containers with TCLP TPb concentrations in excess of the 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 will be transported by a licensed solid waste hauler to a licensed Class I solid waste disposal facility. In either case, the contractor will 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 will be disposed of as required by law. Copies of relevant Material Safety Data Sheets (MSDSs) shall be appended to the Environmental Protection Plan.

E. The CONTRACTOR is responsible for the materials and processes where wastes may be generated under the contracted activities. 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 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 will 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, F.A.C. and Chapter 62-780, F.A.C.

3.07 FISH AND WILDLIFE RESOURCE PROTECTION:

A. The CONTRACTOR shall control and minimize interference with, disturbance to, and damage of fish and wildlife resources.

B. 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’S Construction Manager 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.

C. 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 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.

D. The CONTRACTOR shall designate an on-site person to be responsible for implementation and adherence to the Environmental Protection Plan and provide that name to the DISTRICT. The person designated as responsible for the Environmental Protection Plan shall be able to identify the threatened and endangered species listed in the Environmental Protection 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.

E. 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 DISTRICT’s Construction Manager once every two (2) weeks. See attached Wildlife Log, Appendix A. If nesting activity is detected within and/or adjacent to the Project site, the CONTRACTOR shall immediately contact DISTRICT’s Construction Manager for determination of further action and possibly to determine if seasonal or daily timing restrictions on construction activities is needed.

F. 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.

3.08 PROTECTION OF MIGRATORY BIRDS

A. All construction personnel shall be advised that migratory birds are protected by the Florida Endangered and Threatened Species Act of 1977, Title XXVIII, Chapter 372.072, and the U.S. Fish and Wildlife Service pursuant to the Migratory Bird Treaty Act of 1918 and the Endangered and Threatened Species Act of 1982, as amended. The CONTRACTOR may be held responsible for harming or harassing the birds, their eggs or their nests as a result of the construction.

B. Nesting Activity Notification: 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.

C. The CONTRACTOR shall ensure that all vehicle and vehicle operators will be notified to avoid all caracaras if at all possible. All on-site personnel will be educated to recognize caracaras. If any caracara is encountered, it will be avoided and allowed to leave the area on its own before vehicle or equipment is resumed.

D. Caracaras are carrion feeders (feed on dead animals). As such, they are attracted to road kill. The CONTRACTOR will be diligent in removing road kill from all access roads and other areas where equipment (trucks, bull dozers, pans etc) are operating in an effort to avoid vehicle impacts with caracara attracted to road kill. Road kill will be removed on a daily basis.

E. To minimize impacts to foraging caracara, a speed limit of 25 miles per hour will be posted for all vehicular traffic on site. This does not apply to public roads with higher posted speed limits around the project site.

3.09 STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE:

A. The Eastern Indigo Snake Protection/Education Plan as provided in this paragraph 3.09 has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their
construction personnel. At least fifteen (15) days prior to any clearing/land alteration activities, the CONTRACTOR shall notify the appropriate USFWS Field Office via e-mail that the Eastern Indigo Snake Protection/Education Plan will be implemented as described below (South Florida Field Office: verobeach@fws.gov). As long as the signatory of the e-mail certifies compliance with the below Eastern Indigo Snake Protection/Education Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the CONTRACTOR may move forward with the Project.

B. If the CONTRACTOR decides to use an eastern indigo snake protection/education plan other than the approved Eastern Indigo Snake Protection/Education Plan below, written confirmation or “approval” from the USFWS that the CONTRACTOR’s plan is adequate must be obtained. At least fifteen (15) days prior to any clearing/land alteration activities, the CONTRACTOR shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within thirty (30) days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

C. The Eastern Indigo Snake Protection/Education Plan materials consist of: 1) a combination of posters and pamphlets (see Poster Information paragraph below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see Pre-Construction Activities and During Construction Activities paragraphs below).

D. POSTER INFORMATION

1. Posters as provided at the end of this SECTION (“PROTECTED SPECIES Eastern Indigo Snake” and “ATTENTION: THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!”) shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Eastern Indigo Snake Protection/Education Plan compliance shall be printed on 11” x 17” or larger paper and laminated).

2. 25 MPH Speed Limit Signs shall be posted on site as a precaution and reiterated at site meetings.

E. 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 are NOT to be handled.

F. 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.

G. 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.

H. PROTECTION UNDER FEDERAL AND STATE LAW: Killing, harming, or harassing indigo snakes is strictly prohibited and punishable under State and Federal Law. 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.

I. 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.

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

1. Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;

2. Personnel must NOT attempt to touch or handle snake due to protected status.

3. Take photographs of the snake, if possible, for identification and documentation purposes.

4. Immediately notify supervisor or the DISTRICT, and the appropriate USFWS office, with the location information and condition of the snake.

5. 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.

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

1. Cease clearing activities and immediately notify supervisor or the DISTRICT’s designated agent, and the appropriate USFWS office, with the location information and condition of the snake.

2. Take photographs of the snake, if possible, for identification and documentation purposes.

3. Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

L. IF YOU SEE AN **INJURED** EASTERN INDIGO SNAKE ON THE SITE:

1. Cover snake with cardboard box or similar container, if it cannot be picked up, and place in a container out of direct sunlight;

2. Contact the on-site supervisor, District, and USFWS immediately;

3. Contact Busch Wildlife Sanctuary (David Hitzig, Executive Director, has agreed to treat injured indigo snakes from the C-44 Project site: 2500 Jupiter Park Dr, Jupiter, FL 33458 and (561) 575-3399), and arrange pick up or have someone from the C-44 site transport the snake to the Busch Wildlife Sanctuary.

4. Record the location, date, time of day and circumstances that lead to finding the snake and report this info to the USFWS within 15 days.

M. Telephone numbers of USFWS Florida Field Offices to be contacted if a live, dead or injured eastern indigo snake is encountered:
1. North Florida Field Office – (904) 731-3336

2. Panama City Field Office – (850) 769-0552

3. South Florida Field Office – (772) 562-3909. The C-44 Project is within the South Florida Field Office area of responsibility.

N. PRE-CONSTRUCTION ACTIVITIES

1. The CONTRACTOR will post educational posters in the CONTRACTOR’S construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the CONTRACTOR will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the Project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational tri-fold brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Eastern Indigo Snake Protection/Education Plan for compliance shall be printed double-sided on 8.5” x 11” paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Eastern Indigo Snake Protection/Education Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided in a previous paragraph.

O. DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one (1) business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the CONTRACTOR’s designated agent should visit the project area to observe the condition of the posters and Eastern Indigo Snake Protection/Education Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

P. POST CONSTRUCTION ACTIVITIES

1. Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within thirty (30) days of Project completion. The report is to be provided to the DISTRICT and is to be sent
electronically to the appropriate USFWS e-mail address listed in Part 3.08.A. of this SECTION. Final Payment will not be made unless this report has been submitted by the CONTRACTOR.

Q. DISTRICT Coordination

1. The CONTRACTOR shall copy the DISTRICT on all correspondence with USFWS as part of implementation and compliance with the Eastern Indigo Snake Protection/Education Plan.

3.010 ENVIRONMENTAL PROTECTION RECORD RETENTION: The CONTRACTOR shall retain a copy of all required permits, the complete Environmental Protection 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 NOI from Notice to Proceed (NTP) through the Contract Period. 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 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’s Construction Manager at the time of contract close-out.

3.011 PROTECTION OF AIR RESOURCES: 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 appropriate. This includes control of particulates, dust generated by or incidental to construction activity, burning and odors.

3.012 PRESERVATION AND RECOVERY OF HISTORIC, ARCHAEOLOGICAL, 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 contract drawings or other documents. If so designated, the CONTRACTOR shall install protection for these resources and shall be responsible for their preservation during the contract's duration. The CONTRACTOR shall not distribute maps or other information on these resource locations except for distribution among the CONTRACTOR's staff with a "need to know" technical responsibility for protecting the resources.

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

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.
Appendix A
Wildlife Log

For Threatened and 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.

- Eastern Indigo Snake
- Bald Eagle
- Wood Stork
- Florida Panther
- Caracara
- Gopher Tortoise
- Other

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Date of Sighting</th>
<th>Time of Sighting</th>
<th>Temperature</th>
<th>Wind (mph)</th>
<th>Weather Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(ex: note sky cover, raining, humid, cloudy, sunny, cool, hot, etc)</td>
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<table>
<thead>
<tr>
<th>Construction Activity Occurring</th>
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<table>
<thead>
<tr>
<th>Equipment being Used</th>
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<table>
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<tr>
<th>Condition of Animal</th>
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<table>
<thead>
<tr>
<th>Behavior of Animal</th>
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<table>
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<tr>
<th>Actions taken after sighting</th>
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<table>
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<tr>
<th>Size of Animal</th>
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<table>
<thead>
<tr>
<th>GPS Coordinates/Specific Location</th>
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<table>
<thead>
<tr>
<th>Pictures Taken (Attach pictures)</th>
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<tr>
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<tr>
<th>Observers Company/Agency</th>
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<table>
<thead>
<tr>
<th>Observers Name</th>
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<th>Print Name:</th>
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<th>Signature:</th>
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<table>
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<tr>
<th>Observers Contact Info</th>
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<tr>
<th>Email:</th>
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EXAMPLE FORM
Wildlife Log

For Threatened and 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.

<table>
<thead>
<tr>
<th>☑ Eastern Indigo Snake</th>
<th>☐ Bald Eagle</th>
<th>☑ Wood Stork</th>
<th>☐ Florida Panther</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Caracara</td>
<td>☐ Gopher Tortoise</td>
<td>☐ Other</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Project Name</th>
<th>C-44 Reservoir</th>
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<tr>
<td>Date of Sighting</td>
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<tr>
<td>Time of Sighting</td>
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<tr>
<td>Temperature</td>
<td>75°</td>
</tr>
<tr>
<td>Wind (mph)</td>
<td>5-10 mph</td>
</tr>
</tbody>
</table>

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:
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.
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.

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.

August 12, 2013
PROTECTED SPECIES
Eastern Indigo Snake

The Eastern Indigo Snake;
• NON-VENOMOUS, thick bodied snake up to 8ft long
  • Shiny bluish-black on back and belly or portion of belly may be red or cream colored
  • Coloring on chin or side of head may be bluish-black, red, cream or white

These rare snakes are protected by the Endangered Species Act (ESA).

It is violation to HARRASS, HARM, PURSUE, HUNT SHOOT, WOUND, KILL, CAPTURE, OR COLLECT ENDANGERED OR THREATENED SPECIES.

If encountered do not approach, cease activities, document the sighting, and allow the Eastern Indigo Snake sufficient time to move away from the area on its own.

Should an Eastern Indigo Snake become trapped, injured, or killed, IMMEDIATELY call the USFWS at (772) 562-3909

FWC at (561) 625-5122
ATTENTION:
THREATENED EASTERN INDIGO SNAKES MAY BE PRESENT ON THIS SITE!!!

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

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END OF SECTION

August 31, 2013

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.

END OF SECTION

P100548 May 9, 2014
C-44 Interim System Discharge Spillway Corrected Final/RTA Submittal
02436-16