GENERAL NOTES:

1. HORIZONTAL COORDINATES ARE BASED ON A SURVEY COMPLETED BY NOBLES CONSULTING GROUP, INC. JOB NO. 1655-002, DATED 5/2/2017. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM (NAVD88).

2. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND ARE CONSIDERED APPROXIMATE ONLY. UTILITIES SHALL REMAIN UNLESS OTHERWISE NOTED.

3. THE CONTRACTOR SHALL NOTIFY UTILILITY OWNERS CONSTRUCTION OF THE BOUNDARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DYNAMITE AND EXPLOSIVES BEING USED IN THE AREA.

4. ALL PUBLIC LAND OR WATERBODIES WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A MONUMENT IS DETAILED, ALL LAND IS TO BE PROTECTED. IF A MONUMENT IS DESTROYED, THE CONTRACTOR SHALL NOTIFY THE COUNTY SURVEYOR, WITHIN 24 HOURS, BEFORE CONTINUING CONSTRUCTION. ALL MONUMENTS WILL BE PROTECTED AFTER THE CONTRACTOR'S WORK IS COMPLETED.

5. THE CONTRACTOR SHALL NOT BRING ANY HAZARDOUS MATERIALS INTO THE PROJECT. SHOULD THE CONTRACTOR REQUIRE SUCH PRODUCTS, THEY WILL BE ORDERED AND DELIVERED PRIOR TO THE START OF CONSTRUCTION.

6. ALL HAZARDOUS MATERIALS ON THE SITE WILL BE HANDLED AND TRANSPORTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.

7. ALL SAFETY PRECAUTIONS SHALL BE OBSERVED BY THE CONTRACTOR DURING CONSTRUCTION.

8. THE CONTRACTOR MUST COMPLY WITH THE REQUIREMENTS OF THE LOCAL, STATE, AND FEDERAL REGULATIONS RELATING TO THE PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT.

9. THE CONTRACTOR SHALL REASSURE THE COUNTY THAT ALL WORK IS BEING CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

10. NO DEVIATIONS OR REVISIONS FROM THESE PLANS BY THE CONTRACTOR SHALL BE ALLOWED WITHOUT WRITTEN APPROVAL FROM THE COUNTY.
GEOWEB CELLULAR CONFINEMENT SYSTEM

1. GEOWEB SYSTEM SHALL BE GW20V-CELL SYSTEM MANUFACTURED BY PRESTO GEOSYSTEMS OR APPROVED EQUAL. PRESTO GEOSYSTEMS MAY BE CONTACTED AT 800-746-2424 OR ONLINE AT WWW.PRESTOGEOS.COM.

2. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER CALCULATIONS FOR GEOWEB LOAD SUPPORT AND ANCHORAGE REQUIREMENTS FOR MW25-44 LOADING AND/OR ANTICIPATED CONSTRUCTION LOADS. WHICHER EVER IS GREATER, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA.

3. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER INCLUDING MANUFACTURER'S PRODUCT DATA, SAMPLES AND SECTION LAYOUT.

4. INSTALL CELLULAR CONFINEMENT GEOWEB SYSTEM IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

5. THE CELLULAR CONFINEMENT SYSTEM MATERIAL SHALL BE PROVIDED FROM A SINGLE MANUFACTURER FOR THE ENTIRE PROJECT.

6. THE MANUFACTURER'S QUALITY MANAGEMENT SYSTEM SHALL BE CERTIFIED AND IN ACCORDANCE WITH ISO 9001:2000 AND CE CERTIFICATION. ANY SUBSTITUTE MATERIALS SUBMITTED SHALL PROVIDE A CERTIFICATION THAT THEIR CELLULAR CONFINEMENT MANUFACTURING PROCESS IS PART OF AN ISO PROGRAM AND A CERTIFICATION WILL BE REQUIRED SPECIFICALLY STATING THAT THEIR TESTING FACILITY IS CERTIFIED AND IN ACCORDANCE WITH ISO. AN ISO CERTIFICATION FOR THE SUBSTITUTE MATERIAL WILL NOT BE ACCEPTABLE UNLESS IT IS PROVEN IT PERTAINS SPECIFICALLY TO THE SGEWEL MANUFACTURING OPERATIONS.

7. THE MANUFACTURER SHALL PROVIDE CERTIFICATION OF COMPLIANCE TO ALL APPLICABLE TESTING PROCEDURES AND RELATED SPECIFICATIONS. THE MANUFACTURER SHALL HAVE A MINIMUM OF 20 YEARS EXPERIENCE PRODUCING CELLULAR CONFINEMENT SYSTEMS.

8. GEOFILTRATION SEPARATION LAYER SHALL BE ADVANCED DRAINAGE SYSTEMS (ADS) GB100 D-4 NONWOVEN GEOTEXTILE OR APPROVED EQUAL. ADS CAN BE CONTACTED AT 800-617-610 OR ONLINE AT WWW.ADS-PIPE.COM.

TYPICAL SECTION

BERM STABILIZATION

* FROZEN CONTROL BLANKET SHALL BE SEP-2 POLYPROPYLENE TURF REINFORCED MAT MANUFACTURED BY EAST COAST EROSION CONTROL OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

TYPICAL SECTION DETAILS

PROJECT NAME: CENTREVILLE TRACE POND

STRUCTURE REPLACEMENT

TYPICAL SECTION DETAILS
NOTES

1. NUMBERS LEFT OF BORING INDICATE STANDARD PENETRATION TEST (SPT) N VALUES FOR 12 IN. PENETRATION UNLESS OTHERWISE NOTED.

2. WATER ELEVATIONS SHOWN ARE THE WATER ELEVATIONS ENCOUNTERED. FLUCTUATIONS IN THE ELEVATION OF WATER SHOULD BE EXPECTED.

3. SOIL DESCRIPTIONS, TEST DATA, AND STANDARD PENETRATION VALUES SHOWN ARE FOR THE SOIL BORING ONLY AND MAY NOT APPLY TO ANY OTHER LOCATIONS EXCEPT AT THE LOCATION OF THE SOIL BORING. EXTRAPOLATION OF THE SOIL BORING DATA TO OTHER LOCATIONS IS THE SOIL RESPONSIBILITY OF THE PERSON PERFORMING THE EXTRAPOLATION.

SOIL BORING LOCATION MAP

AUTOMATIC HAMMER:

<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>SPT (INCHES/12 IN)</th>
<th>SPT (INCHES/12 IN)</th>
</tr>
</thead>
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<tr>
<td>MATERIALS</td>
<td>LESS THAN 3</td>
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</tr>
<tr>
<td>LOOSE</td>
<td>3 - 8</td>
<td>1 - 3</td>
</tr>
<tr>
<td>MEDIUM DENSE</td>
<td>3 - 8</td>
<td>1 - 3</td>
</tr>
<tr>
<td>FIRM</td>
<td>3 - 8</td>
<td>1 - 3</td>
</tr>
<tr>
<td>VERY DENSE</td>
<td>GREATER THAN 40</td>
<td>GREATER THAN 24</td>
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<tr>
<td>SPLIT-SPOON: INSIDE DIAMETER:</td>
<td>7.375 IN</td>
<td></td>
</tr>
<tr>
<td>SPLIT-SPOON: OUTSIDE DIAMETER:</td>
<td>1.0 IN</td>
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</tr>
<tr>
<td>Hammer Diameter:</td>
<td>10.0 IN</td>
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<tr>
<td>Hammer Weight:</td>
<td>100.0 LBS</td>
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LEGEND

MEASURED WATER LEVEL

SOIL BORING LOCATION

LABORATORY TESTING RESULTS

WATER CONTENT
-200 SIEVE
PLASTICITY INDEX
LIQUID LIMIT
UNCONFINED COMPRESSIVE STRENGTH (PSF)
WEIGHT OF HAMMER

UNITED CLASSIFICATION GROUP SYMBOL (SM)
AASHO CLASSIFICATION GROUP SYMBOL (A-2-4)

SILTY FINE SAND (SM)
CLAYEY FINE TO PLASTIC CLAYEY SAND (SC)
PLASTIC SILT (MH)
HIGHLY PLASTIC SANDY CLAY (CH)
WEATHERED LIMESTONE
LIMESTONE
NOTES

1. EXCAVATE EMBANKMENT BENCHES STARTING AT THE BOTTOM AND WORKING TO THE TOP OF SLOPE.

2. AFTER BENCH HAS BEEN EXCAVATED, SMOOTH THE SURFACE AND COMPACT TO AT LEAST 95% OF THE SOIL'S STANDARD PROCTOR DRY DENSITY.

3. BACKFILL THE REQUIRED GRADE WITH A CLAYEY SAND (A-2-6/A-6) WITH A MAXIMUM LIQUID LIMIT OF 45%, PERCENTAGE OF FINES (PASSING THE NO. 200 SIEVE) NO GREATER THAN 45%, AND A MAXIMUM ORGANIC CONTENT OF 1% BY WEIGHT.

4. THE FILL SOILS SHALL BE COMPACTED IN LIFTS THAT DO NOT EXCEED 9 INCHES OF LOOSE SOIL AND COMPACTED TO 95% OF THE SOIL'S STANDARD PROCTOR DRY DENSITY.

5. THESE FILL SOILS WILL BE MOISTURE SENSITIVE AND WILL NEED TO BE COMPACTED AT A MOISTURE CONTENT CLOSE TO THE SOIL'S STANDARD PROCTOR OPTIMUM.

6. THE BENCHED SHALL BE BACKFILLED AND COMPACTED STARTING AT THE BOTTOM OF THE SLOPE AND WORKING TO THE TOP OF THE SLOPE.

7. NO MORE THAN 3 BENCHES SHALL BE EXPOSED PRIOR TO BACKFILLING.

8. AFTER THE BENCHES HAVE BEEN COMPACTED, SHAPE THE FACE OF THE SLOPE TO THE REQUIRED FINAL SLOPE.

9. THE FOLLOWING MINIMUM DENSITY TESTS SHALL BE CONDUCTED ON THE COMPACTED SOIL: 3 TESTS ON EACH PREPARED BENCH SUBGRADE AND 3 TESTS PER LIFT PER BENCH.
### SUMMARY OF EARTHWORK

<table>
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<tr>
<th>DESCRIPTION</th>
<th>QUANTITY (CY)</th>
<th>A</th>
<th>B</th>
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<tr>
<td>REGULAR EXCAVATION</td>
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<td>BORROW EXCAVATION</td>
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<td>FILL ADJUSTMENT (25%) (867.2 x 0.25)</td>
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### CROSS SECTIONS

<table>
<thead>
<tr>
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<th>DESCRIPTION</th>
<th>DATE</th>
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### REGISTR, SLIGER ENGINEERING, INC

### LEON COUNTY DEPARTMENT OF PUBLIC WORKS

**PROJECT NAME:** CENTREVILLE TRACE POND STRUCTURE REPLACEMENT

**SHEET NO.** 20
## SUMMARY OF EARTHWORK

<table>
<thead>
<tr>
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<td></td>
<td>13.7</td>
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<td>Borrow Excavation</td>
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<td>Fill Adjustment (25%)</td>
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<td>Truck Adjustment (43%)</td>
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<tr>
<td><strong>TOTAL BORROW EXCAVATION</strong></td>
<td>24.8</td>
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<td></td>
<td></td>
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MAINTENANCE OF TRAFFIC NOTES

1. CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC PLANS TO THE LEON COUNTY PROJECT MANAGER FOR APPROVAL. MAINTENANCE OF TRAFFIC PLANS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER OR CERTIFIED BY AN INDIVIDUAL WITH A CURRENT FOOT CERTIFIED ADVANCED NOT PRACTITIONER CERTIFICATE.

2. TRAFFIC IS TO BE MAINTAINED IN ACCORDANCE WITH FOOT STANDARD PLANS 103-603 AND 103-604, DEPENDENT UPON THE OPERATION TO BE PERFORMED. FOR GENERAL T.C.Z REQUIREMENTS AND ADDITIONAL INFORMATION, REFER TO STANDARD PLANS INDEX 103-600.

3. THE TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR HIGHWAYS AND INTERSTATE HIGHWAYS", AND THE FLORIDA DEPARTMENT OF TRANSPORTATION'S STANDARD PLANS FOR ROAD CONSTRUCTION.

4. EXISTING SPEED LIMIT SIGNS SHALL BE MAINTAINED WITHIN THE LIMITS OF THE ACTIVE WORK ZONES ALONG PROJECT.

5. POSITIVE DRAINAGE SHALL BE MAINTAINED PRIOR TO, DURING, AND AFTER CONSTRUCTION.

6. ALL LANES MUST BE REOPENED TO NORMAL TRAFFIC WITHIN 12 HOURS DURING AN EVALUATION NOTICE OF A HURRICANE OR ANY OTHER CATASTROPHIC EVENT AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE LEON COUNTY PROJECT MANAGER.

7. PUBLIC ACCESS TO RESIDENCES MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

8. CONTRACTOR IS RESPONSIBLE FOR KEEPING UP ROAD MAINTENANCE DURING CONSTRUCTION. CONTRACTOR SHALL SWEEP DAILY OR AS NECESSARY TO KEEP STREETS FREE OF SEDIMENT AND DEBRIS.

9. ALL LANE CLOSURES SHALL REQUIRE APPROVAL FROM LEON COUNTY. REQUESTS SHALL BE SUBMITTED TO LEON COUNTY 2 WEEKS PRIOR TO LANE CLOSURE OPERATIONS.
1. Rock shall be rubble riprap ditch lining in accordance with FDOT Standard Specifications Section 2.20.
2. For location and limits of rock filter, see grading plan.
3. Rock filter shall be installed prior to installation of steel sheet pile wall. Excavation slopes for installation of rock filter shall not exceed 1V:2H.

**Downstream Rock Filter Detail**

**Side Bank Sand Filter Detail**

**Foot Type D-3 Filter Fabric Envelope**

**Internal Filter Fabric**

**8" PVC Underdrain**

**No Filter Fabric**

**3" of Coarse Aggregate**

**Fine Aggregate**

**Notes:**

1. Fine aggregate shall be quartz sand meeting the requirements of Section 902-4 of the FDOT Standard Specifications.
2. Coarse aggregate shall be gravel or stone meeting the requirements of FDOT Standard Specifications Sections 901-2 or 901-3. Gradation shall be according to Section 903, Grades G, 467, 5, 56 or 57 stone.
3. Underdrain shall be in accordance with FDOT Standard Specifications Section 904.
4. Filter fabric sock shall meet the requirements of FDOT Standard Specifications Section 904.
5. Filter fabric shall be Type D-3 in accordance with FDOT Specifications Section 905. The internal filter fabric shall have a permeability of 0.5 Darcy and an ADS of 400. All filter fabric joints shall overlap a minimum of 1". The internal filter fabric shall overlap the coarse aggregate or the fine aggregate a minimum of 1".
6. Underdrain outlet pipes shall be perforated and all bends shall be made using 45° (0.250) elbows. 90° bends shall be constructed with two 45° elbows separated by at least 1° of straight pipe.
7. PVC pipe shall conform to the requirements of ASTM F798 or ASTM F498. Perforated PVC pipe shall be in accordance with the perforation requirements given in AASHTO M54 or AASHTO M196.
1. Floating Turbidity Barrier

2. Soil Tracking Prevention Device

3. Tree Protection Barricade Detail

4. Wood Rail "Pinellas Style" Fence Detail

5. Type III Silt Fence

CONSTRUCTION DETAILS

Leon County Department of Public Works
2250 West Bloomingdale Road, Tallahassee, FL 32309
Toll Free (888) 606-1500 • Fax (888) 606-5501
Phone (850) 891-4000 • Fax (850) 891-4059

Construction Details Sheet No. 26

Revised by: John A. T. Sanders, P.E.
Date: 2/12/2008

Prepared by: M. K. Kasparian
Date: 2/12/2008

Revised by: M. K. Kasparian
Date: 2/12/2008

Revised by: M. K. Kasparian
Date: 2/12/2008
GENERAL NOTES:
1. THE DESIGN PARAMETERS INDICATED IN THE TABLES WERE USED IN THE SHEET PILE WALL ANALYSIS. IF THE CONTRACTOR PLANS OPERATIONS WHICH EXCEED THE DESIGN PARAMETERS SHOWN, THE CONTRACTOR'S SPECIALTY ENGINEER WILL REDESIGN THE WALL TO RESIST CONSTRUCTION LOADS AT A MAXIMUM DEFLECTION OF 3 INCHES.
2. THE EMBANKMENT SEEPAGE INVESTIGATION WAS PERFORMED BY ENVIRONMENTAL AND GEOTECHNICAL SPECIALISTS, INC. SEE REPORT OF CORE BORINGS FOR BORING LOCATION AND SOIL PROPERTIES.
3. THE ENVIRONMENTAL CLASSIFICATION FOR THE STRUCTURE IS EXTREMELY AGGRESSIVE

SHEET PILE DRIVING NOTES:
1. SHEET PILE SHEETS SHALL BE DRIVEN BY USE OF VIBRATORY OR PRESS IN METHODS ONLY.
2. ALL SHEET PILE SECTIONS SHALL BE DRIVEN TO THE MINIMUM DEPTHS SHOWN IN THE PLANS. PILES SHALL BE DRIVEN AS NOT TO SUBJECT THE PILES TO DAMAGE AND TO ENSURE PROPER INTERLOCK THROUGHOUT THEIR LENGTHS; CONTRACTOR SHALL REMOVE AND REPLACEx ANY SECTION DAMAGED DURING HANDLING AND/OR INSTALLATION OR WHICH WOULD FAIL OUT OF INTERLOCK AT NO COST TO THE CONTRACTOR
3. ALL SHEET PILING SHALL HAVE SHOP DRAWINGS (SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA) SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE SHOP DRAWINGS SHALL INCLUDE ALL INFORMATION AND DIMENSIONS NECESSARY TO CONSTRUCT THE WALLS. CONTRACTOR SHALL SUBMIT A SHEET PILING INSTALLATION PLAN (SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA) TO THE ENGINEER 14 DAYS PRIOR TO SHEET PILE INSTALLATION FOR APPROVAL.

NZ 28 SECTION PROPERTIES

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<tr>
<th>MATERIALS OF CONSTRUCTION</th>
<th>MINIMUM WALL TIP</th>
<th>WALL TOP</th>
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<tr>
<td>WELD</td>
<td>118.33</td>
<td>158.33</td>
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<tr>
<td>FLANGE</td>
<td>150.60</td>
<td>158.33</td>
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NZ 28 STEEL SHEET PILE WALL CANTILEVER DATA TABLE

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<tr>
<th>STATION</th>
<th>MINIMUM WALL TIP</th>
<th>WALL TOP</th>
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<tbody>
<tr>
<td>BEGIN TO END</td>
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<td>158.33</td>
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<td>3+06.76</td>
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SHEET PILE INTERLOCK WELDING:
1. ALL WELDS SHALL CONFORM TO ANSI/AWS D1.1-96 UTILIZING E70XX ELECTRODES. WELDS SHALL BE A MINIMUM OF 1/8 INCH THICK.
2. ALL PILES SHALL BE SUPPLIED TO THE SITE IN DOUBLE UNITS WITH THE CENTER INTERLOCKS (THREADED AT THE FACTORY) WITH SEALING WELD CARRIED OUT AT THE FACTORY IN A HORIZONTAL POSITION. WELDING SHALL BE PERFORMED PER THE MANUFACTURER'S RECOMMENDATIONS.
3. WHEN THE GAP BETWEEN ADJACENT INTERLOCKS IS SMALL ENOUGH, IT IS POSSIBLE TO CREATE A SEAL BY APPLYING A SIMPLE FILLET WELD ACROSS THE GAP. WHERE THE GAP IS TOO LARGE TO BE BRIDGED IN A SINGLE PASS, INTRODUCTION OF A SMALL DIAMETER BAR CAN BE EFFECTIVE WITH A WELD RUN APPLIED TO EITHER SIDE OF THE JOINT TO CREATE THE SEAL.

SHEET PILE COATING REQUIREMENTS:
1. COAT ENTIRE SURFACE OF STEEL SHEET PILES WITH THE EXCEPTION OF NON-WELDED INTERLOCK CHAMBERS.
2. STEEL SHEET PILE COATING SHALL BE A SHOP-APPLIED COATING, CONSISTING OF AN INORGANIC ZINC PRIMER COAT, AND 2 COATS OF COAL TAR EPOXY IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 560.
3. COATING APPLICATION EQUIPMENT SHALL BE IN ACCORDANCE WITH THE COATING MANUFACTURER'S TECHNICAL DATA REQUIREMENTS.
4. STEEL SHEET PILE SURFACES IN CONTACT OR ENCASED IN CONCRETE SHALL NOT BE COATED.
WATER-SWELLING PRODUCT:

1. THE WATER-SWELLING PRODUCT SHALL BE ADEKA ULTRASEAL P-021 HYDROPHILIC WATERSTOP OR APPROVED EQUAL. THE PRODUCT SHALL BE A HYDROPHILIC URETHANE PASTE AND SHALL MEET THE MINIMUM PERFORMANCE CRITERIA:
   - HARDNESS V-S: A40
   - TENSILE STRENGTH: 4 MPA
   - ELONGATION: 850%
   - SPECIFIC GRAVITY: 1.2
   - VOLUME EXPANSION: 100%
   - MASS CHANGE: NOT GREATER THAN 5.0%

2. THE WATER-SWELLING PRODUCT SHALL BE FIELD APPLIED USING THE ROXAN SEALANT SYSTEM OR APPROVED EQUAL. THE FOLLOWING SPECIFICATIONS SHALL BE APPLIED ALONG WITH THE MANUFACTURER’S SPECIFICATIONS AND RECOMMENDATIONS:
   1. THE INTERLOCK MUST BE DRY PRIOR TO APPLICATION.
   2. LAY OUT THE PILING IN THE HORIZONTAL POSITION.
   3. RECENTLY ROLLED PILES NEED TO BE CLEANED WITH A JET OF COMPRESSED AIR. IN THE EVENT OF CORROSION IN THE INTERLOCK, CLEANING WITH A STEEL WIRE BRUSH AND/OR HIGH PRESSURE WATER JET IS NECESSARY.
   4. APPLY TO THE SHEET PILE INTERLOCK USING AN AIRLESS OR Extrusion pump at a RATE OF 90 LF PER GALLON.
   5. IN ORDER TO ENSURE ADEQUATE COATING OF THE SHEET PILE INTERLOCK, USE THE MANUFACTURER SUPPLIED PROFILARRED PATENTED TEMPLATE TO EXTEND AND SPREAD THE WATER-SWELLING PRODUCT.
   6. FILL IN THE INTERLOCK TAKING INTO ACCOUNT THE DIRECTION OF THE DRAINING.
   7. THE PILES SHALL BE SUPPLIED AND FITTED TOGETHER IN DOUBLE UNITS. THE INTERMEDIATE INTERLOCK SHALL BE SHOP WELDED. ONLY THE TRAILING INTERLOCK SHALL BE FILLED WITH THE WATER-SWELLING PRODUCT.
   8. PILES WITH WATER-SWELLING PRODUCT SHALL BE TRANSPORTED WITH THE OPENINGS OF THE SEALED, FREE INTERLOCKS FACING INWARDS.
   9. THE WATER-SWELLING PRODUCT SHALL BE APPLIED UNDER SHELTER AT AMBIENT TEMPERATURES. PRIOR TO DRIVING OF SHEETS, ALLOW FOR A MINIMUM CURE DURATION OF 48 HOURS AFTER APPLICATION OF WATER-SWELLING PRODUCT. STORE SHEETS DURING CURE PERIOD WITH THE OPEN ENDS OF THE SEALED INTERLOCKS FACING DOWNWARD AND UNDER SHELTER.

SHEET PILE SPACING:

1. AT THE CONTRACTOR’S OPTION, THE SHEET PILE SPILES MAY BE SUPPLIED IN FULL LENGTH SECTIONS OR PARTIAL LENGTH SECTIONS. IF THE CONTRACTOR ELECTS TO HAVE THE SHEETS SUPPLIED IN PARTIAL SECTIONS, THE SECTIONS SHALL BE FIELD SPACED IN ACCORDANCE WITH THE STEEL SHEET PILE SPACING DETAILS AT NO ADDITIONAL COST TO LEON COUNTY.

C-1-P CONCRETE CAP:

1. CONCRETE SHALL BE IN ACCORDANCE WITH FOOT SPECIFICATIONS SECTION 346.
2. CONCRETE FOR C-1-P SHEET PILE CAP SHALL BE CLASS 1 (SUBSTRUCTURE) WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
3. THE CONTRACTOR SHALL COORDINATE C-1-P CONCRETE CAP CONSTRUCTION WITH BOARDWALK RAMP CONSTRUCTION.
STRUCTURE NOTES

1. CONSTRUCTION IS TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE, LOCAL CODES, STANDARDS, REGULATIONS AND LAW. THE GOVERNING BUILDING CODE FOR THIS PROJECT IS THE FLORIDA BUILDING CODE 2017, SIXTH EDITION INCLUDING ALL CURRENT AMENDMENTS.

2. THE CONTRACTOR SHALL COORDINATE ALL CONTRACT DOCUMENTS WITH FIELD CONDITIONS, DIMENSIONS AND PROJECT SHOP DRAWINGS PRIOR TO CONSTRUCTION. DO NOT SCALE DRAWINGS 1:1. USE ONLY PRINTED DIMENSIONS. ELECTRONIC DRAWINGS SHOULD NOT BE ASSUMED TO BE DRAWN TO SCALE. REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER PRIOR TO PROCEEDING WITH WORK. DO NOT CHANGE SIZE OR LOCATION OF STRUCTURAL MEMBERS WITHOUT WRITTEN INSTRUCTION FROM THE ENGINEER.

3. THE STRUCTURE AND ITS COMPONENTS ARE DESIGNED TO BE STRUCTURALLY SOUND WHEN COMPLETED. PRIOR TO COMPLETION, THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND TEMPORARY BRACING OR SUPPORT.

4. DETAILS LABELED "TYP" APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED. WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION, QUESTION REGARDING THE APPLICABILITY OF TYPICAL DETAILS SHALL BE RESOLVED BY THE LEON COUNTY REPRESENTATIVE.

CONCRETE

1. CONCRETE SHALL BE IN ACCORDANCE WITH SECTION 346 OF THE FDOT STANDARD SPECIFICATIONS. CONCRETE SHALL INCLUDE A PERMEABILITY REDUCING ADMIXTURE SUCH AS Sika Watertight Concrete Powder or Approved Equal. USE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CONCRETE CLASS</th>
<th>MIN. 28 DAY COMPRESSIVE STRENGTH</th>
<th>MAXIMUM WATER/CEMENT RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMERGENCY SPILLWAY</td>
<td>IV SUBSTRUCTURE</td>
<td>5,500 PSI</td>
<td>0.41</td>
</tr>
<tr>
<td>C-J-P WEIR</td>
<td>IV RETAINING WALLS</td>
<td>5,500 PSI</td>
<td>0.41</td>
</tr>
</tbody>
</table>

2. CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS SECTION 413 FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO THE CENTELELINE OF THE BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.

3. VIBRATE CONCRETE TO PREVENT HONEYCOMBS AND Voids. DO NOT USE ADMIXTURES CONTAINING CHLORIDE SALTS IN THE CONCRETE.

4. ALL REINFORCING STEEL SHALL COMPLY WITH FDOT STANDARD SPECIFICATIONS SECTION 415 & 931.
SECTION A-A

NOTE: VERTICAL JOINTS SHALL BE SEALED.

DRAIN HOLE DETAIL

HOT Poured SEALER OR TYPE A OR B SILICONE PER SPECIFICATION 933
SIXA GREENSTREAK PVC WATERSTOP 600 DUMBBELL CENTERBEND OR APPROVED EQUAL.

DETAIL A

CONCRETE LINED EMERGENCY SPILLWAY DETAIL

NOTE: COMPACT FOUNDATION SOIL TO MINIMUM OF 2'-3" FEET BELOW THE CONCRETE LINED EMERGENCY SPILLWAY TO 95% OF THE SOIL'S MODIFIED PROCTOR DRY DENSITY. LIFTS SHALL NOT EXCEED 3' IN HEIGHT.
NOTE: CONCRETE WEIR NOT SHOWN

SECTION H-H
CONCRETE STILLING BASIN TYPICAL SECTION

SECTION G-G
CONCRETE STILLING BASIN AND WEIR OUTLET CUTOFF WALL

SECTION F-F
OUTLET WINGWALL

SECTION E-E
INLET WINGWALL

CONCRETE FLOOR BLOCK DETAILS

CONCRETE FLOOR BLOCK DETAILS

CORNER DETAIL

WEIR DETAILS (4 OF 4)
1. The front panel, side panels, and flat bars are to be hot dip galvanized after fabrication.

2. A skimmer consists of two (2) side panels, one front panel, two (2) flat bars, and accessory hardware.
<table>
<thead>
<tr>
<th>SIZE</th>
<th>DES</th>
<th>LENGTH</th>
<th>NO</th>
<th>TYP</th>
<th>SIT</th>
<th>B</th>
<th>C</th>
<th>O</th>
<th>E</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>N</th>
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<tbody>
<tr>
<td>4</td>
<td>SC</td>
<td>500</td>
<td>100</td>
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</tbody>
</table>

NOTE:
WORK THIS SHEET WITH FOOT STANDARD
PLANS INDEX 415-001.

END OF LIST
NOTES:
1. ALL PILES SHALL BE HP350 HELICAL PILES SUPPLIED BY SUPPORTWORKS INC. OR APPROVED EQUAL.
2. FOR PILE INSTALLATION DETAILS AND NOTES, SEE HELICAL PILE DETAILS SHEET.
3. SEE BOARDWALK DETAIL SHEETS FOR FOOTING AND BOARDWALK DETAILS.
### HELICAL PILE DATA TABLE

<table>
<thead>
<tr>
<th>STATION</th>
<th>PILE NO.</th>
<th>SHAFT TYPE</th>
<th>BRACKET TYPE</th>
<th>MINIMUM TIP ELEVATION (ft)</th>
<th>ULTIMATE BEARING RESISTANCE (tons)</th>
<th>FINAL INSTALLATION TORQUE (in-lb)</th>
<th>MIN. OVERALL PILE LENGTH (ft)</th>
<th>MIN. FACTORED LOAD DESIGN LOAD (tons)</th>
<th>FS</th>
<th>K_a</th>
<th>MAXIMUM INSTALLATION TORQUE (in-lb)</th>
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<tr>
<td>2+12.00</td>
<td>1-4 HP350 HP350NC88</td>
<td>124.0</td>
<td>50</td>
<td>13,413</td>
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<td>23</td>
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<td>7.0</td>
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<td>2+23.00</td>
<td>1-4 HP350 HP350NC88</td>
<td>124.0</td>
<td>50</td>
<td>13,413</td>
<td>35.0</td>
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<tr>
<td>2+68.47</td>
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<td>2.0</td>
<td>7.0</td>
<td>77,500</td>
<td></td>
</tr>
</tbody>
</table>

**PILE INSTALLATION NOTES:**

1. HELICOIL PILES TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
2. THE REQUIRED ULTIMATE TORSION-CORRELATED CAPACITY SHALL BE VERIFIED AT EACH PILE LOCATION, MONITORING AND RECORDING THE FINAL INSTALLATION TORQUE AND APPLYING DEFAULT TORQUE CORRELATION PER ICC-ES AC358.
3. THE HELICOIL PILES SECTIONS SHALL BE ADDED INTO THE SOIL IN A CONTINUOUS MANNER AT A RATE OF ROTATION LESS THAN 25 RPM. SUITABLE CONSTRUCTION SHALL BE APPLIED TO ACHIEVE THE HELICOIL PILE SECTIONS AT A RATE OF APPROXIMATELY EQUAL TO THE PITCH OF THE HELICOIL PLATE PER REVOLUTION. THE RATE OF ROTATION AND MAGNITUDE OF DOWNWARD PRESSURE SHALL BE ADJUSTED FOR DIFFERENT SOIL CONDITION AND DEPTHS. EXTENSIONS SHALL BE PROVIDED TO OBTAIN THE REQUIRED MINIMUM INSTALLATION LENGTH AND MINIMUM TORSIONAL RESISTANCE SHOWN.
4. THE CONTRACTOR SHALL PROVIDE JORGENSON CONSTRUCTION OF THE INDIVIDUAL HELICOIL PILE INSTALLATION RECORDS WITHIN 24 HOURS AFTER EACH INSTALLATION IS COMPLETED.ג Formal copies shall be submitted within 30 days following the completion of the HELICOIL PILE INSTALLATION RECORDS SHALL CONTAIN A MINIMUM OF THE FOLLOWING:
   - DATE AND TIME OF INSTALLATION
   - LOCATION OF HELICOIL PILE AND PILE IDENTIFICATION NUMBER
   - INSTALLATION HELICOIL PILE MODEL AND CONFIGURATION
   - TERMINATION DEPT, PILE HEAD DEPT, AND LENGTH OF INSTALLED PILE
   - INSTALLATION INCLINATION OF PILE
   - FINAL TORSIONAL RESISTANCE
   - CALCULATED SEITOPHICAL CAPACITY BASED ON FINAL TORSIONAL RESISTANCE
   - COMMENTS PERTAINING TO INTERRUPTIONS, OBSTRUCTIONS OR OTHER RELEVANT INFORMATION
5. A SINGLE PILE LOAD TEST SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM D1143 QUICK TEST METHOD AND THE FOLLOWING CRITERIA:
   - FAILURE CRITERIA - SHALL BE IN ACCORDANCE WITH AC358

**HELCIPE PILS NOTES:**

1. HELICOIL PILES SHALL BE OBTAINED FROM SUPPORTWORKS, INC. OR APPROVED EQUAL.
2. MINIMUM MATERIAL REQUIREMENTS:
   - SHAFT MATERIAL: ASTM A325, 5KSI, FU = 76 KSI
   - COUPLERS - FY = 70 KSI, FU = 80 KSI
   - HELICOIL PLATES: ASTM A325 SR 50
   - SHAFT COUPLING HARDWARE - (4) 1/2" GRACE 5 BOLTS WITH NUTS
   - BRACKET WELDMENT - ASTM A992
   - EXTERNAL SLEEVE - FY = 50 KSI, FU = 62 KSI
   - CAP PLATE - ASTM A527 GRADE 50
   - BRACKET HARDWARE - (2) 1/2" "AA 1429 GRADE 5 BOLTS WITH NUTS
3. ALL WELDING TO BE IN ACCORDANCE WITH AWS D1.1 LATEST ISSUE WITH ET-32-A MIN. ELECTRODE.
4. HELICOIL PLATES HAVE A BOLT "X" PITCH WITH LEADING AND TRAILING EDGES BEING NO MORE THAN 1/2" OUT OF PARALLEL.
5. LEADS, EXTENSIONS, COUPLERS, HELICOIL PLATES AND BRACKETS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH ASTM A123.
6. SHAFT COUPLING AND BRACKET HARDWARE SHALL BE ZINC COATED IN ACCORDANCE WITH ASTM B633.
1. Construction is to comply with the requirements of the governing building code and all other applicable federal, state, local, codes, standards, regulations and law. The governing code for this project is the Florida Building Code 6th edition (2011) including all current amendments.

2. The structure is designed to be structurally sound when completed. Prior to completion, the contractor is responsible for stability and temporary bracing or support.

3. Design superimposed loads: deck live load = 100 psf.

4. Design wind loads: governing code = ASCE 7-10. Ultimate design wind speed = 90.7 = 107 mph. Nominal design wind speed = 75.85 = 89.9 mph. Risk category = 1. Exposure = MWARS C. Components and cladding = C. Internal pressure coefficient = 0.65/1.0 (open building). Mean roof height = 1/3. Wind directional factor = K_\omega = 0.85. Topography factor = 1.0.

5. Verify all dimensions and screen conditions prior to the start of construction. Notify the engineer of any discrepancies or inconsistencies. No changes of information shown on the drawings shall be made without the specific written approval of the engineer. Design information shown on the drawings provide overall dimensional parameters and describe elements to be constructed. The contractor shall adjust dimensions and details as required to fit existing conditions. The engineer shall be notified of any proposed modifications.

6. Details labeled ‘TYP’ apply to all situations that are the same or similar to those specifically referenced. Questions regarding the applicability of typical details shall be resolved by the engineer.

7. Contractors who discover discrepancies, omissions or variations in the contract documents shall immediately notify the engineer. The engineer will resolve the condition and issue a written clarification.

8. The general contractor shall coordinate all contract documents with field conditions, dimensions and project shop drawings prior to construction. Do not scale drawings marked with (+) use only printed dimensions.

9. Electronic drawings should not be assumed to be drawn to scale. Report any discrepancies in writing to the engineer prior to completing work. Do not change size or location of structural members without written instruction from the structural engineer of record.

10. The contractor shall protect adjacent property, his own work, and the public from harm. The contractor is solely responsible for construction means and methods, and job site safety including all OSHA requirements.

11. The contractor shall submit for approval, 3 sets of plans, calculations, and specifications signed and sealed by a licensed professional engineer in the state of Florida. For any proposed changes to the contract documents, dimensional lumber:

   - All dimensional lumber shall be 545 and grade stamped by an agency certified by the American lumber standards committees board of review and manufactured in accordance with PS-20, latest revision.

   - Framing material shall be southern yellow pine No.1 or better, with a maximum moisture content of 19%.

   - All material shall be southern pine, complying with the stress value tables located on this sheet.

   - Joists are not acceptable in exposed material.

   - PT denotes pressure treated. All PT lumber shall be kiln dried after treatment (KDPT).

   - Allow lumber shall be pressure treated in accordance with the American Wood Protection Association Standard T1.

   - Field cuts, holes, and damage shall be treated with a brush applied copper naphthanate or approved preservation system and applied according to manufacturer's specifications.

   - Contractor shall submit product treatment data sheets for approval by Leon County prior to construction.

   - Contractor shall abide by ABPA use category standard U. Materials not properly treated shall be removed and replaced at the contractors expense.

   - All lumber fasteners shall be applied per table 2304.1.1. IRC 2017 unless otherwise noted.

   - Connector A: All connectors shall be manufactured by Simpson Strong Tie or approved equal unless otherwise noted.

   - Connectors and fasteners that are not stainless steel (SS) shall be not dipped galvanized for corrosion protection. 2.0 (10g) - MIN. 180 GSUM 2.0 oz. of ZINC per square foot of surface area per ASTM A653.

   - JOS (2 ga. and thicker) MIN. 4.0, coating weight of 2.0 oz. per square foot of surface area per ASTM A615. Connectors may require special fabrication by the manufacturer. No additional contract time shall be granted to obtain the required connectors. Contractor shall have all connectors inspected by the engineer prior to concrete embedment or covering connectors with subsequent work.

   - Contractor shall use fasteners that are compatible with the corrosion protection of the connector. And shall use all fasteners required to obtain maximum published connector loads unless otherwise noted.

   - Contractor shall install all connectors in accordance with manufacturers specifications.

   - Threaded rods with nuts and washers of the same material type and diameter may be substituted for thru bolts, but not for carriage bolts.

   - Boardwalk piles:

     - Helical pile beam brackets (4 required) may require special fabrication. Shop drawings signed and sealed by a licensed professional engineer in the state of Florida shall be submitted to Leon County prior to fabrication or installation. All costs for pile brackets shall be included in the unit cost of the helical piles. No additional contract time shall be granted to obtain the required brackets.

   - Boardwalk fasteners:

     - Construct reinforced concrete in accordance with foot specifications section 346.

     - Concrete shall be Class 5, with a minimum 28 day compressive strength of 3,400 psi.

     - Use normal weight concrete for all structural members, unless otherwise noted.

     - Provide ASTM A615 grade 60 reinforcing steel. Reinforcing steel shall be accurately placed, rigidly supported and fixed tied in place with appropriate bar supports and spacers. For bar bending details, see reinforcing bar list. Sheet 4D. Provide cover over reinforcing as follows:

       - Element: Bottom 7". Top 3". Sides 3".

   - Soil and compaction:

     - Soil below boardwalk fasteners shall be compacted to a depth of 28" at optimum moisture content to 95% modified proctor per ASTM D-1557 (19 inch max lift).

     - At least 1 in-place density test shall be performed for every footer prior to placing any steel in the excavations after the footer has been placed and cured. Forms are removed. Backfill should be placed around the fasteners in loose lift not exceeding 9 inches and compacted to meet the testing criteria as described above.

   - Boardwalk: Boardwalk footers shall be compacted to a depth of 28" at optimum moisture content to 95% modified proctor, per ASTM D-1557 (19 inch max lift).

   - At least 1 in-place density test shall be performed for every footer prior to placing any steel in the excavations after the footer has been placed and cured. Forms are removed. Backfill should be placed around the fasteners in loose lift not exceeding 9 inches and compacted to meet the testing criteria as described above.
Attachment A

Typical Boardwalk Section
Bents 3 and 4 (N.T.S.)

1. **2"x12" Built-Up Beams and Joists Shall Have Members Fastened Together with (2) 100 Stainless Steel Ring Shank Nails @ Each End and @ 12" o.c.**

2. **2"x12" Built-Up Beams and Joists Shall Have Members Fastened Together with (3) 100 Stainless Steel Ring Shank Nails @ Each End and @ 12" o.c.**

---

**Note:**
- 2-Ply Member Shown, 3-Ply and 4-Ply Members Similar.