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<td>B1-18</td>
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</tr>
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### EAST WINWOOD WAY

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<td>Report of Core Borings</td>
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<td>Suprastructure Details (2 of 3)</td>
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<tr>
<td>B2-14</td>
<td>Suprastructure Details (3 of 3)</td>
</tr>
<tr>
<td>B2-15</td>
<td>Approach Slides</td>
</tr>
<tr>
<td>B2-16</td>
<td>Gabion Bank Protection Details</td>
</tr>
<tr>
<td>B2-17</td>
<td>Reinforcing Bar List</td>
</tr>
<tr>
<td>B2-18</td>
<td>Load Rating Chart</td>
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</table>

### GOLDEN PHEASANT DRIVE

<table>
<thead>
<tr>
<th>SHEET NO.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>B3-1</td>
<td>Plan And Elevation</td>
</tr>
<tr>
<td>B3-2</td>
<td>Report of Core Borings</td>
</tr>
<tr>
<td>B3-3</td>
<td>Foundation Layout</td>
</tr>
<tr>
<td>B3-4</td>
<td>Pile Data Table</td>
</tr>
<tr>
<td>B3-5</td>
<td>Steel Pipe Pile Details</td>
</tr>
<tr>
<td>B3-6</td>
<td>End Bents No. 1 - Phase 1</td>
</tr>
<tr>
<td>B3-7</td>
<td>End Bents No. 2 - Phase 1</td>
</tr>
<tr>
<td>B3-8</td>
<td>End Bents No. 1 - Phase 2</td>
</tr>
<tr>
<td>B3-9</td>
<td>End Bents No. 2 - Phase 2</td>
</tr>
<tr>
<td>B3-10</td>
<td>Substructure/Suprastructure Details</td>
</tr>
<tr>
<td>B3-11</td>
<td>Bridge Elevations</td>
</tr>
<tr>
<td>B3-12</td>
<td>Suprastructure Details (1 of 3)</td>
</tr>
<tr>
<td>B3-13</td>
<td>Suprastructure Details (2 of 3)</td>
</tr>
<tr>
<td>B3-14</td>
<td>Suprastructure Details (3 of 3)</td>
</tr>
<tr>
<td>B3-15</td>
<td>Approach Slides</td>
</tr>
<tr>
<td>B3-16</td>
<td>Gabion Bank Protection Details</td>
</tr>
<tr>
<td>B3-17</td>
<td>Reinforcing Bar List</td>
</tr>
<tr>
<td>B3-18</td>
<td>Load Rating Chart</td>
</tr>
<tr>
<td>B3-19</td>
<td>Auger Cast Pile Details</td>
</tr>
<tr>
<td>B3-20</td>
<td>Pipe Casing Details</td>
</tr>
</tbody>
</table>
### GENERAL NOTES

**A. GENERAL SPECIFICATIONS:**
1. Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction (July, 2017 Edition) and supplements thereto.
2. Leon County Supplemental Specifications to FDOT Road and Bridge Construction Standard Specifications.

**B. DESIGN SPECIFICATIONS:**
2. American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications (7th Edition) and all subsequent interim.

**C. VERTICAL DATUM:**
All elevations refer to North American Vertical Datum of 1988 (NAVD 88).

**D. ENVIRONMENT:**
- Superstructure = Moderately Aggressive
- Substructure = Moderately Aggressive

**E. DESIGN LOADING:**
1. Live Loads: HL-93 With Dynamic Load Allowance
2. Dead Loads:
   - 33" F-Shape Traffic Railing: 420 psf
   - Reinforced Concrete: 150 psf
   - Future Wearing Surface: 15 psf
   - Asphalt Overlay: 15 psf
3. Utilities: No allowance for utility loads has been included in the design.

**F. CONSTRUCTION LOADING:**
It is the construction Contractor’s responsibility to provide for supporting construction loads that exceed AASHTO HL-93.

**G. SESSON METHODOLOGY:**
- Load Resistance and Factor Design (LRFD) method using strength, service, and fatigue limit states.

**H. MATERIALS:**
1. Concrete: All concrete shall be in accordance with FDOT Standard Specifications Section 346.

<table>
<thead>
<tr>
<th>Concrete Class</th>
<th>Minimum 28-day Compressive Strength</th>
<th>Location of Concrete in Structure</th>
<th>Traffic Railing Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>FC = 3,500 PSI</td>
<td>II Superstructure</td>
<td></td>
</tr>
<tr>
<td>II (Bridge Deck)</td>
<td>FC = 4,500 PSI</td>
<td>Approach Slabs</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>FC = 5,500 PSI</td>
<td>III Superstructure and Stent Caps</td>
<td></td>
</tr>
<tr>
<td>IV (Graded Slab)</td>
<td>FC = 4,000 PSI</td>
<td>Concrete for Pipe Piles</td>
<td></td>
</tr>
</tbody>
</table>

2. Concrete Cover:
- Cast-In-Place Superstructure (Top of Deck): 2 1/2"
- Cast-In-Place Superstructure (Except Top of Deck): 2"
- Cast-In-Place Substructure (Cast Against Earth): 4"
- Cast-In-Place Substructure (Formed Surfaces): 3"

Concrete cover dimensions shown in the plans do not include reinforcement placement and fabrication tolerances unless shown as "nominal cover". See FDOT Standard Specifications Section 415 for allowable tolerances.

All dimensions pertaining to the location of reinforcing steel are to centerline of bar except where clear dimensions are noted to hole of concrete.

3. Reinforcing Steel:
- All reinforcing steel shall be ASTM A615, grade 60 steel.

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**APPLIED FINISH COATING:**
A Class 2 Finish Coating shall be applied to the portions of the structure shown on the Surface Finish Detail, this sheet.

**UTILITIES:**
For plan locations of existing utilities, see the Roadway Plans. Locations of utilities shown in plans are approximate. For disposition of utilities, see the Roadway Plans.

**PLAN DIMENSIONS:**
All dimensions in these plans are measured in feet either horizontally or vertically unless otherwise noted.

**BRIDGE NAME:**
- MELTING WILLOW WAY
- EAST WINDWOOD WAY
- GOLDEN PLEASANT DRIVE

**JOINTS IN CONCRETE:**
Construction joints will be permitted only at locations indicated in the plans. Additional construction joints or alterations to those shown shall require approval of the Engineer.

**SCREEDING DECK SLABS:**
Screw the riding surface of the bridge deck and Approach Slabs to achieve the finish grade elevations shown in the plans. Account for theoretical deflections due to self weight, deck casting sequence, deck forming systems, construction loads, overlays and temporary shoring, etc. as required.

**TRAFFIC CONTROL PLAN:**
For Temporary Traffic Control notes and details, refer to the Roadway Plans. Any and all shoring required for phased construction shall be the responsibility of the contractor.

**PHASING OF WORK:**
Work phasing and progression of the work shall conform to the Typical Traffic Control and Phasing Plan located in the Roadway Plans.
NOTES:
1. All piles are 20"Ø Open Ended Steel Pipe Piles.
2. All Piles are Plumb.
3. For the Pile Cutoff Elevations, see Pile Data Table sheet.
4. For Test Pile Lengths See Pile Data Table sheet.
5. For Additional Pile Installation Notes & Data, See Pile Data Table sheet.
### PILE DATA TABLE

<table>
<thead>
<tr>
<th>PILE</th>
<th>PILE SIZE</th>
<th>NOVEL RESISTANCE</th>
<th>TENSION RESISTANCE</th>
<th>TEST</th>
<th>REQUIRED LOAD</th>
<th>FACTORED LOAD</th>
<th>TOTAL SCOUR RESISTANCE</th>
<th>NET SCOUR RESISTANCE</th>
<th>100-YEAR SCOUR RESISTANCE</th>
<th>DESIGN ELEVATION</th>
<th>CUT-OFF ELEVATION</th>
<th>PILE 1</th>
<th>PILE 2</th>
<th>PILE 3</th>
<th>PILE 4</th>
<th>PILE 5</th>
<th>PILE 6</th>
<th>PILE 7</th>
<th>PILE 8</th>
<th>PILE 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>End Bents 1</td>
<td>20</td>
<td>70</td>
<td>N/A</td>
<td>20.0</td>
<td>50</td>
<td>N/A</td>
<td>45</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.65</td>
<td>45.1</td>
<td>45.1</td>
<td>45.1</td>
<td>45.1</td>
<td>45.1</td>
<td>45.1</td>
<td>45.1</td>
</tr>
<tr>
<td>End Bents 2</td>
<td>20</td>
<td>70</td>
<td>N/A</td>
<td>20.0</td>
<td>50</td>
<td>N/A</td>
<td>45</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>0.65</td>
<td>45.2</td>
<td>45.2</td>
<td>45.2</td>
<td>45.2</td>
<td>45.2</td>
<td>45.2</td>
<td>45.2</td>
</tr>
</tbody>
</table>

**PILE INSTALLATION NOTES:**
- Under no circumstances shall pile be driven above the Minimum Tip Elevation specified. Minimum Tip Elevation is required for internal stability.
- Under no circumstances shall pile be driven above the minimum tip elevation specified.
- No jutting will be allowed without the approval of the Engineer.
- At each Bents pile driving is to commence at the center of the Bents and proceed outward.
- Tip Protection shall be provided for all piles. The point protection shall be commercially available worman open type pile protector.
- All pile shafts shall be driven open ended. Remove the existing soil inside the pipe pile and fill with reinforced concrete down to the limits shown on sheet R2-0. In the event that the pipe pile plugs and the top soil within the pipe is below the limits of the reinforced concrete, the void shall be filled with reinforced concrete.

**PILE DYNAMIC ANALYSIS NOTES:**
- A dynamic load test shall be performed at the test pile location.
- A dynamically loaded test pile of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
- If the pile driving equipment is different in Phase II than in Phase I, the contractor shall conduct an additional test for each bent at the location of Phase II, prior to any other pile driving activities in order to reestablish driving criteria.

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**KEEPSING WILLOW WAY**

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**REVISIONS**

<table>
<thead>
<tr>
<th>DATE</th>
<th>PROJECT NO.</th>
<th>SHEET NO.</th>
<th>REVISIONS</th>
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<td>8/2020</td>
<td>RAYMOND TUCKER DRAINAGE IMPROVEMENTS</td>
<td>BL-4</td>
<td></td>
</tr>
</tbody>
</table>
**PLATE PILES**

The Plate Piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pile column, after corrosion of the steel pipe shell.

**REINFORCED STEELS**

All reinforcing steel shall conform to ASTM A416, Grade 60.

**CONCRETE**

Concrete for piles and columns shall be CLASS IF (Drilled SpeciFcation) F'c = 4,000 psi, and shall conform to Section 346 of FGID Standard Specifications. The final installed piles shall be clean and free of water before placing reinforcing steel and concrete. Concrete placement shall conform to section 455-J of FGID Standard Specifications.

**WELDING**

All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Codes.

**OPEN ENDED DRIVING TIPS/CUTTING SHOES**

Open ended driving tips shall be provided for all piles. The contractor shall submit pile tip protection shop drawings to Leon County Public Works for review. Pile Tips/Cutting shoes shall be provided by Associated Pipe & Fitting LLC (APF) or approved equal. APF can be contacted via phone at 844-770-0023 or www.assemblyjackson.com. The pile tip protection shall be included in the cost of the steel pipe piles.

**PAYMENT NOTES**

All costs associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PIPING, 455-35-20) or TEST PILES STEEL, 455-34-20), whichever applies. Cost shall include but not be limited to furnishing and driving the steel pipe piles with pile tip protection, removing ass from inside of the piles, furnishing and placing the concrete and reinforcing steel.
1. All piles are plumb.
2. For pile loads see Pile Data Table.
3. For General Notes see Sheet B-3.
4. For bar bending diagrams see KDOT Standards Index No. 23000
5. See Bl-10 for sections Bl-1 and Bl-2.
6. Elevation 0' is to top of concrete surface
see Roadway Plans for Finish Grade Elevations.

<table>
<thead>
<tr>
<th>Bent 2</th>
<th>Point</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elev. A</td>
<td>46.00</td>
<td></td>
</tr>
<tr>
<td>Elev. B</td>
<td>47.66</td>
<td></td>
</tr>
<tr>
<td>Elev. C</td>
<td>45.16</td>
<td></td>
</tr>
<tr>
<td>Elev. D</td>
<td>49.68</td>
<td></td>
</tr>
<tr>
<td>Elev. E</td>
<td>49.92</td>
<td></td>
</tr>
</tbody>
</table>

NOTE:
1. All piles are plumb.
2. For pile loads see Pile Data Table.
3. For General Notes see Sheet B-3.
4. For bar bending diagrams see KDOT Standards Index No. 23000
5. See Bl-10 for sections Bl-1 and Bl-2.
6. Elevation 0' is to top of concrete surface
see Roadway Plans for Finish Grade Elevations.
NOTES:
1. All piles are plumb.
2. For pile loads see Pile Load Table.
3. For General Notes see Sheet 9-3.
4. For bar bending diagrams see FSGT Standards.

Index No. 21350

5. See BI-10 for sections A-A and B-B.

Bent 1

<table>
<thead>
<tr>
<th>Point</th>
<th>Elevation</th>
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</thead>
<tbody>
<tr>
<td>Dev. A</td>
<td>47.89</td>
</tr>
<tr>
<td>Elev. B</td>
<td>47.57</td>
</tr>
<tr>
<td>Elev. C</td>
<td>45.07</td>
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<tr>
<td>Elev. D</td>
<td>49.57</td>
</tr>
<tr>
<td>Elev. E</td>
<td>49.81</td>
</tr>
</tbody>
</table>

# Phase 2

- Construction Joint
- Outline of Approach Slab
- Section View
- 20' Dia. Open Ended Steel Pipe Pile (Typ.) See sheet BI-5 for Pile Requirements

# Phase 1

- Construction Joint Permitted
- 5 1/2" x 1/4" Chamber

# After Phase 1 bent cap has been poured, the succeeding pour shall begin at the end away from and proceed towards the previously placed cap.
CROSS REFERENCES:
FDOT Design Standards Index 20900, For additional approach slab sections and details.

APPRAOCH SLAB NOTES:
1. ASPHALT OVERLAY: Payment for asphalt overlay items is included in Roadway Plan Items. Continue the asphalt pavement over the approach slab and match the course type used on the roadway.
2. CONCRETE: Provide Class II (bridge deck) concrete for approach slabs.
3. See Roadway Plans for Asphalt Overlay and Optional Base Group Details.

APPRAOCH SLAB INDEX 20900 TABLE OF DIMENSIONS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>DIMENSIONS</th>
<th>ANGLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub No.1 - Phase 1</td>
<td>L1: N/A</td>
<td>20'-0&quot;</td>
</tr>
<tr>
<td>Sub No.2 - Phase 1</td>
<td>L1: N/A</td>
<td>20'-0&quot;</td>
</tr>
<tr>
<td>Sub No.1 - Phase 2</td>
<td>L1: 20'-0&quot;</td>
<td>N/A</td>
</tr>
<tr>
<td>Sub No.2 - Phase 2</td>
<td>L1: 20'-0&quot;</td>
<td>N/A</td>
</tr>
</tbody>
</table>

SECTION A

2'-0" Cover (Typ.)

4" Cover

Optional Base, see note 1

2'-0" Cover (Typ.)

2 Layers of 50 lb. Smooth Roofing Paper

Construction Joint Permitted

Dowels filled with End Bents, see (End Bent Sheets for placement)
Notes:
1. All Gabions shall be Woodferri or approved equal.
2. Woodferri can be contacted at www.woodferri-usa.com or by phone at 503-223-8990
3. Compact the soil below gabions to a minimum density of 90% of the soil modified Proctor maximum dry density (ASTM D-4989) for a depth of at least 48 inches.
4. Gabion components shall be in accordance with FDOT Standard Specification Section 500-3.3. Install Gabion in accordance to FDOT Standard Specification Section 500-3.5 and the manufacturer's specifications and recommendations.
## Load Rating Summary Details for Reinforced Concrete Bridges

**Table 2 - LRFDR**

<table>
<thead>
<tr>
<th>Limit State</th>
<th>Vehicle</th>
<th>Weight (tons)</th>
<th>Load Factors</th>
<th>Moment (Strength)</th>
<th>Shear (Strength)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LL</td>
<td>OC</td>
<td>GW</td>
<td>Rating Factor</td>
</tr>
<tr>
<td>Strength I (Inv)</td>
<td>HL-93</td>
<td>N/A</td>
<td>1.75</td>
<td>1.25</td>
<td>1.50</td>
<td>0.091</td>
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<tr>
<td>Strength I (Op)</td>
<td>HL-93</td>
<td>N/A</td>
<td>1.35</td>
<td>1.25</td>
<td>1.50</td>
<td>0.091</td>
</tr>
<tr>
<td>Strength II</td>
<td>Ft120</td>
<td>60.0</td>
<td>1.35</td>
<td>1.25</td>
<td>1.50</td>
<td>0.091</td>
</tr>
</tbody>
</table>

**General Notes:**
1. This table is based on the requirements established in the January 2017 "Structures Manual".

**Table 2 Notes:**
1. Permitted capacity is determined by using the permit vehicle in all lanes.
2. Has the AASHTO LRFD Specifications Article 5.6.5.3 longitudinal reinforcement been satisfied? Yes [ ] No [ ]
3. Load Rating Performed by RSE in house MathCad Sheet.
4. Slab Bridge design moment in accordance with LRFD 4.6.2.3 are satisfactory for shear (LRFD 5.14.4.1).

**Abbreviations:**
- Inv = Inventory
- Op = Operating

---

**WEPPING WILLOW WAY**

**LOAD RATING CHART**

**LEON COUNTY DEPARTMENT OF PUBLIC WORKS**

**PROJECT NAME:** RAYMOND TUCKER DRAINAGE IMPROVEMENTS

**SHEET NO.: BI-J8**

**LEON COUNTY DEPARTMENT OF PUBLIC WORKS**

**PROJECT NAME:** RAYMOND TUCKER DRAINAGE IMPROVEMENTS

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**LEON COUNTY DEPARTMENT OF PUBLIC WORKS**

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**SHEET NO.: BI-J8**

**LEON COUNTY DEPARTMENT OF PUBLIC WORKS**

**PROJECT NAME:** RAYMOND TUCKER DRAINAGE IMPROVEMENTS

**SHEET NO.: BI-J8**
1. All piles are 20" Dia. Open Ended Steel Pipe Piles.
2. All piles are Plumb.
3. For the Pile Cutoff Elevation, see Pile Data Table sheet.
4. For Test File Lengths, see Pile Data Table sheet.
5. For Additional File Installation Notes & Data, see Pile Data Table sheet.
<table>
<thead>
<tr>
<th>PIER OR BENT NUMBER</th>
<th>PIER TYPE</th>
<th>NOMINAL BEARING RESISTANCE (tons)</th>
<th>TENSION RESISTANCE (tons)</th>
<th>MINIMUM ELEVATION (ft.)</th>
<th>TEST PILE LENGTH (ft.)</th>
<th>REQUIRED NET ELEVATION (ft.)</th>
<th>REQUIRED PRESTRESS ELEVATION (ft.)</th>
<th>FACTORED DISSIPATION LOAD (tons)</th>
<th>COWN BRIDGE</th>
<th>TOTAL SCOUR RESISTANCE (tons)</th>
<th>NET SCOUR RESISTANCE (tons)</th>
<th>100-YEAR SCOUR ELEVATION (ft.)</th>
<th>LOAD CASE 1</th>
<th>LOAD CASE 2</th>
<th>LOAD CASE 3</th>
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**FACTORED DESIGN LOAD = NET SCOUR RESISTANCE + DRAIN DRAIN**

- Nominal Bearing Resistance

**TENSION RESISTANCE**
- The ultimate pile friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).

**TOTAL SCOUR RESISTANCE**
- An estimate of the ultimate static pile friction resistance provided by the soil from the required pretension or jetting elevation to the scour elevation.

**NET SCOUR RESISTANCE**
- An estimate of the ultimate static pile friction resistance provided by the soil from the required pretension or jetting elevation to the scour elevation.

**200-YEAR SCOUR ELEVATION**
- Estimated elevation of scour due to the 100 year storm event.

**LONG TERM SCOUR ELEVATION**
- Estimated elevation of scour used in design for extreme event loading.

**PILE INSTALLATION NOTES**
- Contractor to verify location of all utilities prior to any pile driving.
- Minimum Tip Elevation is required for lateral stability.
- Under no circumstance shall pile be driven above the minimum tip elevation specified.
- No jetting will be allowed without the approval of the Engineer.
- Tip protection shall be provided for all pipe piles. The point protection shall be commercially available well-on open type pipe protector.
- All pile piles shall be driven open ended. Remove the existing soil outside of the pipe pile and fill with reinforced concrete down to the limits shown on sheet SHE-5. In the event that the pipe pile sags and the top soil which the pile is below the limits of the reinforced concrete, the void shall be filled with unreinforced concrete.

**PILE DYNAMIC ANALYSIS NOTES**
- A Dynamic Load Test shall be performed at the test pile locations.
- A dynamically load test result of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
- If the pile driving equipment is different in Phase II than in Phase I, the contractor shall conduct an additional test for each bent at the location of pile 3, prior to any other pile driving activities in order to reestablish driving criteria.
DESIGN NOTES:
The pipe piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pile column, after corrosion of the pipe shell.

STEEL PIPE PILES:
Pipe for piles shall be new, straight steel pipe conforming to Section 962 of KSOT Standard Specifications for Road and Bridge Construction. Welded and seamless steel pipe piles. Ends of pile sections shall be perpendicular to the longitudinal axis. Pipe wall thickness to be 3/16".

SPICESS:
The ends of all pile sections to be spliced shall be beveled and full butt-welded as shown on the plans. All splices shall be watertight.

INSPECTION:
The Contractor shall have available at all times a competent inspector for inspecting the entire length of the driven pile before placing reinforcing steel and concrete.

PILE CUT OFF:
Steel Pipe Piles shall be cut off at the required elevations above the ground level to the level of the pile, methods used to cut piles shall meet the approval of the Engineer.

REINFORCING STEEL:
All reinforcing steel shall conform to ASTM A615, Grade 60.

CONCRETE:
Concrete for piles and columns shall be Class II (Unshrinkable Mortar) with a unit weight of 140 lb/ft³ and shall conform to Section 346 of the Specifications. The final hardened pile concrete shall be clean and free of water before placing reinforcing steel and concrete.

NULL TEST REPORT:
A null test report shall be required for all steel pipe piles, and submitted to Leon County for approval.

WELDING:
All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Code.

OPEN ENDED DRIVING TIPS/CUTTING SCHOES:
Open ended driving tips shall be provided for all piles. The contractor shall submit piles to the Leon County Public Works for review. Pile tips/Cutting shoes shall be provided by Associated Pile & Fitting, LLC (APF) or approved equal. APF can be contacted at www.associatedpile.com or at 1-800-538-5040. The pile tip protection shall be included in the cost of the steel pipe piles.

PAYMENT NOTES:
All costs associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PILING, 455-35-20 or TEST PILES STEEL 455-44-20, whichever applies. Cost shall include but not be limited to furnishing and driving the steel pipe piles, removing spoil from inside of the pile, furnishing and placing the concrete and reinforcing steel.

ELEVATION OF PIPE PILE

PIPE PILE SPlice DETAIL
NOTES:
1. All piles are plum.
2. For pile loads see Pile Data Table sheet.
3. For General Notes see Sheet B-3
4. For bar bending diagrams see FDOT Design Standard Index No. 21000.
5. See 92-10 for section A-A and B-B.
6. Elevation E is to top of concrete surface see Roadway Plans for Finish Grade Elevations.

PLAN

Elevation for End Rent 1, Phase 2:

- Rent 1
- Elev. A: 50.14
- Elev. B: 49.81
- Elev. C: 47.32
- Elev. D: 51.49
- Elev. E: 51.81

ELEVATION

- Construction Joint
- Outline of Approach Slab
- 6" Premolded Expansion Material (Typ.)
- 6" Dia. Open Grates Steel Pipe Pit (Typ.) See sheet 92-6 for Pile Requirements

END RENT No. 1 - PHASE 1
NOTES:
1. All piles are plumb.
2. For pile loads see Pile Data Table sheet.
3. For General Notes see Sheet B-3.
4. For bar bending diagrams see FDOT Design Standard Index No. 21300.
5. See B2-10 for section A-A and B-B.
6. Elevation E is to top of concrete surface seen roadway plans for finish grade elevations.

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<td>Elev. E</td>
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Phase 1

B-3-9
Notes:
1. AllGabions shall be Woodferri or approved equal.
2. Woodferri can be contacted at www.woodferri.com or by phone at 310-203-0020
3. Compaction the soil below gabions to a minimum density of 90% of the soil Woodferri Proctor maximum dry density (ASTM D698) in a depth of at least 24 inches.

GABION DETAILS

SECTION A-A

WATCH EXISTING 
CHANNEL PROFILES FOR DETAIL

CHANNEL PROFILE STA. K+050

GABION PROTECTION DETAILS

PROJECT NO.: RAYMOND TUCKER DRAINAGE IMPROVEMENTS

LEON COUNTY DEPARTMENT OF PUBLIC WORKS
2500 WILốcCUMBER ROAD, TALLAHASSEE, FLORIDA 32309
PHONE (850) 606-5500 * FAX (850) 606-5521
PROJECT NUMBER 320

EAST WINDWOOD WAY

ATTACHMENT A
| WORK | LENGTH | NO. | TP/ST | D | F | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 6    | 001    | 18-0 | 10-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 | 18-0 |
| 5    | 003    | 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10| 10-10 |
| 5    | 007    | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  | 3-6  |
| 8    | 009    | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  | 4-6  |
| 8    | 004    | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  | 0-0  |

**NOTES:**

1) Work this sheet with Design Standards Index 21300.
2) Reinforcement for pipe piles is to be included in Pay Item STEEL PIPE PILING, 20" OIA PIPE. See Sheet B2-5 for details.
### Load Rating Summary Details for Reinforced Concrete Bridges

#### Table 2 - LRFD

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</table>

#### Abbreviations:
- Inv = Inventory
- Op = Operating

- **RATING LOCATIONS**

- **33'-4" Single Span**
- **"Dim. X"**

#### General Notes:
1. This table is based on the requirements established in the January 2017 "Structures Manual".
2. Permit capacity is determined by using the permit vehicle in all lanes.
3. For the AASHTO LRFD Specifications Article 5.6.2.3 longitudinal reinforcement been satisfied? [ ] Yes [ ] No
4. slab Bridge design moment in accordance with LRFD 4.6.2.3 are satisfactory for shear (LRFD 5.14.4.1).

#### Table 2 Notes:
- Perm It: 0-
- Perm Lt: 0-
- Perm Op: 0-
- Perm In: 0-

**END WOODMORE WAY**
NOTES:

1. All Pile are Plumb.
2. For the Pile Cut-off Elevations, see Pile Data Table.
3. For Test Pile Lengths See Pile Data Table Sheet.
4. For Additional Pile Installation Notes & Data, See Pile Data Table Sheet.
5. The contractor shall install the piles in a manner that will not damage the existing 8" PVC sewer.
6. Casing is required for preformed pile holes at piles 3 and 4 for both End Bents 1 and 2. Install preform pile casing in accordance with FDOT Standard Specifications Section 455-5.
7. For Auger Cast Pile Installation notes and Details, See Auger Cast Pile Details Sheet.
### FILE DATA TABLE

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<th>TENSION RESISTANCE (tons)</th>
<th>MINIMUM ELEVATION (ft)</th>
<th>TEST PILE LENGTH (ft)</th>
<th>REQUIRED NET ELEVATION (ft)</th>
<th>REQUIRED PERCENT ELEVATION (%)</th>
<th>FACTORED LOAD (tons)</th>
<th>OWN HEADROOM (ft)</th>
<th>TOTAL SCOUR RESISTANCE (tons)</th>
<th>NET SCOUR RESISTANCE (tons)</th>
<th>200-YEAR SCOUR ELEVATION (ft)</th>
<th>ELEVATION AT TIP (ft)</th>
<th>REQUIRED HOE HEADROOM (ft)</th>
<th>FILE 1</th>
<th>FILE 2</th>
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*Perform elevation required at files 3 and 4 for end bends 1 and 2.

---

**PILE INSTALLATION NOTES:**
- Contractor to verify location of all utilities prior to any pile driving.
- Minimum tip elevation is required for internal stability.
- Under no circumstance shall pile be driven above the minimum tip elevation specified.
- No jetting will be allowed without the approval of the Engineer.
- Tip protection will be provided for all piles. The pile protection shall be commercially available, weld-on open type pile protector.

**PILE DYNAMIC ANALYSIS NOTES:**
- A Dynamic Load Test shall be performed at each test pile location.
- A dynamically loaded test pile of each test pile will be required following the removal of soil inside the pile and prior to concrete placement.
- If the pile driving equipment is different from Phase II than in Phase I, the contractor shall conduct any additional test for each bent at the location of the pile 2, prior to any other pile driving activities in order to reestablish driving criteria.

---

**GOLDEN PHEASANT DRIVE**
DESIGN NOTES:
The pipe piles with reinforced concrete fill are designed such that the steel pipe shell can corrode completely. The pile capacity is based upon the remaining concrete core acting as a cast-in-place reinforced pipe column, after corrosion of the pipe shell.

STEEL PIPE PILES:
Pipe for piles shall be new, straight steel pipe conforming to Section 962 of the AASTHO Standard Specifications. Welded and seamless steel pipe piles. Ends of pipe section shall be perpendicular to the longitudinal axis. Pipe wall thickness to be 1/4".

SPUGLES:
The ends of all pile sections to be spliced shall be beveled and full butt-welded as shown on the plans. All splices shall be watertight.

INSPECTION:
The Contractor shall have available at all times a suitable drop light for inspecting the entire length of the driven pipe pile before placing reinforcing steel and concrete.

PILE CUT OFF:
Steel pipe piles shall be cut off at the required elevation using a plane normal to the axis of the pile. Methods used in cutting off piles shall meet with the approval of the Engineer.

REINFORCING STEEL:
All reinforcing steel shall conform to AATM A615, Grade 60.

CONCRETE:
Concrete for piles and columns shall be CLASS II (Utilized Shells) F'c = 4200 psi, and shall conform to Section 946 of the Specifications. The final installed pipe piles shall be clean and free of water before placing reinforcing steel and concrete.

WELDING:
All welding shall conform to AMERICAN WELDING SOCIETY (AWS) Bridge Welding Code.

OPEN ENDING DRIVING TIPS/CUTTING SNOUS:
Open ended driving tips shall be provided for all piles. The contractor shall submit pile tip protection shop drawings to Leon County Public Works for review. Pile tips/Cutting shoes shall be provided by Associated Pile & Fitting LLC (APF) or approved equals. APF can be contacted on www.assembledpipe.com or at 1-800-526-3047. The pile tip protection shall be included in the cost of the steel pile piles.

PAYMENT NOTES:
All cost associated with furnishing and installing the Steel Pipe Piles are to be included in the Contract Unit Price for STEEL PILING. Cost shall include but not be limited to furnishing and driving the steel pipe piles, removing spoils from inside of the pile, furnishing and placing the concrete and reinforcing steel.

GOLDEN PHEASANT DRIVE

"Attachment A"
NOTES:
1. All lines are plumb.
2. For pile types see Pile Data Table.
3. For General Notes see Sheet B-3.
4. For bar bending diagrams see FDOT Design Standards
   Index No. 21301.
5. See Sheet B3-10 for Sections A-A and B-B.
6. Elevation E is to the top of the concrete surface
   see the Roadway Plans for False Grade Elevations.

ELEVATION
GOLDEN PHEASANT DRIVE

BENT 2
Point
Elevation

Elev. A 51.82
Elev. B 51.50
Elev. C 49.00
Elev. D 53.08
Elev. E 53.40

END BENT No. 2 - PHASE 1
SHEET NO.
B5-7
NOTES:
1. All piles are plum.
2. For pile loads see Pile Data Table.
3. For General Notes see Sheet B-3.
4. For bar bending diagrams see FGDT Design Standards Index No. 2.100.
5. See Sheet B-3-6 for Sections A-4 and B-B.
6. Elevation E is to the top of the concrete surface see the roadway plans for finish grade elevations.
**Notes**

1. All Gabions shall be manufactured or approved equal.
2. Manufacture can be contacted at www.moussafirri.com or by phone at 305-627-6001.
3. Compact the soil below gabions to a minimum density of 90% of the soil's maximum dry density (6850) for a depth of at least 24 inches.
4. Gabions components shall be in accordance with FDOT Standard Specifications, Section 130-2.2.1, and the manufacturer's specifications and recommendations.
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</table>

**NOTES:**

1. Work this sheet with FOOT Design Standard Index 21300.
2. Reinforcement for pipe piles to be included in the payment for pipe piles. See Steel Pipe Pile Detail Sheet.

**GOLDEN PHEASANT DRIVE**

**REINFORCING BAR LIST**
## Load Rating Summary Details for Reinforced Concrete Bridges

### Table 2 - LRFR

<table>
<thead>
<tr>
<th>Limit State</th>
<th>Vehicle</th>
<th>Weight (tons)</th>
<th>Load Factors</th>
<th>Moment (Strength)</th>
<th>Shear (Strength)</th>
<th>Comments&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>LL</td>
<td>DC</td>
<td>DW</td>
<td>Factor</td>
</tr>
<tr>
<td>Strength I (Inv)</td>
<td>HL-93</td>
<td>N/A</td>
<td>1.75</td>
<td>1.25</td>
<td>1.50</td>
<td>0.097</td>
</tr>
<tr>
<td>Strength I (Op)</td>
<td>HL-93</td>
<td>N/A</td>
<td>1.35</td>
<td>1.25</td>
<td>1.50</td>
<td>0.097</td>
</tr>
<tr>
<td>Strength II</td>
<td>FL120</td>
<td>60.0</td>
<td>1.35</td>
<td>1.25</td>
<td>1.50</td>
<td>0.097</td>
</tr>
</tbody>
</table>

### Abbreviations:
- Inv = Inventory
- Op = Operating

---

**General Notes:**
1. This table is based on the requirements established in the January 2015 "Structures Manual".

**Table 2 Notes:**
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. Has the AASHTO LRFD Specifications Article 5.8.3.5 longitudinal reinforcing been satisfied? **Yes** / **No**
4. Slab bridge design for moment in accordance with LRFD 4.6.2.3 are satisfactory for shear (LRFD 5.14.4.1).

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**RATING LOCATIONS**

![Diagram of rating locations](attachment:diagram.png)
Pile Installation:
Install Piles in accordance with FDOT Standard Specifications Section 455-46. Prior to installation, the Contractor shall submit an Auger cast Pile installation Plan in accordance with FDOT Standard Specifications Section 455-47 to Leon County Department of Public Works for the approval of the Engineer of Record.

Grout:
Grout mixture materials shall be in accordance with Section 455-40 of the FDOT Standard Specifications. Proportion Grout mixture to produce a minimum 28 day compressive strength Fc = 4,200 psi. In accordance with FDOT Standard Specifications Sections 455-4 & 455-42. Allow for a minimum curing time of 48 hours prior to installation of 20° Open Ended Steel Pipe Piles within 4 pile diameters.

Reinforcing Steel:
All reinforcing steel shall conform to ASTM A615, Grade 90.

Pigments:
All costs associated with furnishing and installing of Auger Cast piles are to be included in the contract unit price for AUGER GRUITED PILES.

**AUGER CAST PILE DATA TABLE**

<table>
<thead>
<tr>
<th>Pile No.</th>
<th>Size</th>
<th>Top Elevation</th>
<th>Tip Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12&quot;</td>
<td>46.3</td>
<td>22.3</td>
</tr>
<tr>
<td>2</td>
<td>10&quot;</td>
<td>46.4</td>
<td>22.4</td>
</tr>
</tbody>
</table>

**NOTES:**
For Pipe Casing Details see Sheet BSI-2.
For Auger Cast Pile Location, see sheet 83-1.