GENERAL NOTES:

U.S. COAST GUARD NOTIFICATION: Notify the local office of the U.S. Coast Guard at least 30 days prior to beginning of construction of the Fender System.

14" SQUARE PRESTRESSED CONCRETE PILES - Provide 14" Square Prestressed Concrete Piles of sufficient length to achieve a minimum embedment of 20' into soil having a blow count greater than or equal to 6 (N = 6). Pile splices and build-ups are not permitted. Use only 14" Square Prestressed Concrete Piles with 8 - 1/2" diameter low relaxation Strands fabricated in accordance with Index No. 20614.

PLASTIC LUMBER AND STRUCTURAL COMPOSITE LUMBER WALES: Provide only Plastic lumber and Structural Composite lumber Wailes in accordance with Specification Section 973. Wailes shall be continuous and applied only at locations shown on the plans.

PLASTIC LUMBER DECKING FOR CATWALKS: Provide Plastic lumber decking for catwalks when called for in the Plans in accordance with Specification Section 973.

Install Plastic lumber decking according to manufacturer's recommendations using stainless steel #10 x 3" (minimum) deck screws.

FIBERGLASS OPEN GRATING FOR CATWALKS: Provide Fiberglass Open Grating for catwalks when called for in the Plans. Fiberglass Open Grating shall be a heavy duty design suitable for exterior installations. Maximum gap opening on the walkway surface shall be 1/2". Design live loads and deflections shall be a 50 psf uniformly distributed load with a maximum deflection of 1/2" or L/120 at the center of a simple span and a concentrated load of 250 pounds with a maximum deflection of 1/2" at the center of a simple span. Color of Fiberglass Open Grating shall be gray or black.

Install Fiberglass Open Grating according to manufacturer's recommendations using stainless steel hardware, screws, bolts, nuts and washers. Attach Fiberglass Open Grating to Wailes and Deck Supports at a 2'-0" maximum spacing to as to resist pedestrian live loads and uplift forces from wind, buoyancy and wave action.

CLEARANCE GAUGE AND LIGHT: Clearance Gauge to be furnished by the FDOT and erected by the Contractor. Clearance Gauge width and numeral height is dependant on visibility distance. The required visibility distance shall be determined by the United States Coast Guard District Commander. Provide and install Clearance Gauge Light in accordance with Specification Section 510 and Index No. 21220.

NAVIGATION LIGHTS: Provide and install Navigation Lights in accordance with Specification Section 510, Index No. 21220 and/or project specific details. Provide and maintain Temporary Navigation Lights during construction until permanent Navigation Lights are operational.

BOLTS, THREADED BARS, NUTS, SCREWS AND WASHERS: Furnish stainless steel Bolts in accordance with ASTM F593 Type 316. Furnish stainless steel Threaded Bars in accordance with ASTM A193 Grade B8M. Furnish stainless steel Screws in accordance with ASTM F593 Type 305. Furnish stainless steel Washers compatible with Bolts, Threaded Rods and Nuts under heads and nuts. Torque Nuts on 1" diameter Bolts and Threaded Bars to 150 lb-ft. Keep threads on Bolts, Threaded Bars and Nuts free from dirt, coarse grime and sand to prevent galling and seizing during tightening.

SPICE PLATES: Furnish Splice Plates in accordance with ASTM A240 Type 316.

WIRE ROPE: Provide wire rope meeting one of the following requirements:

1. 5/8" diameter 6x19, 6x25 or 6x37 class IWRC Type 316 stainless steel wire rope with a minimum breaking strength of 18,000 lbs.

2. 1/2" diameter 6x19 galvanized wire rope with ultraviolet ray resistant polypropylene impregnation having an outside diameter of 5/8" with a minimum breaking strength of 22,000 lbs. Protect all ends with heat shrinkable end caps compatible with the rope's polypropylene that provide an effective water-tight seal.

GENERAL NOTES
SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF SINGLE FIXED BRIDGE WITH NONSKEWED CHANNEL

SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF SINGLE FIXED BRIDGE WITH SKEWED CHANNEL

SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF DUAL FIXED BRIDGES WITH NONSKEWED CHANNEL

SCHEMATIC OF DUAL FIXED BRIDGES WITH SKEWED CHANNEL

CROSS REFERENCES:
For Stations and Offsets of referenced Control Points A, B, C and D, Dimension "L" and Clear Channel Width see Fender System Table of Variables in Structures Plans.
For Navigation Light Details see Design Standards Index 21220.
CROSS REFERENCES:
For Sections A-A and B-B see Sheet 4.
For View F-F see Sheet 5.

NOTE:
Plastic Lumber and Composite Lumber Dimensions shown are based on Nominal Lumber Dimensions and may vary depending on Actual Lumber Dimension.

DESCRIPTION:

- **Concrete Piles (Typ.):** 14" Sq. Prestressed
- **Fender (Typ.):** Mark A (along Front Face of Fender)
- **Mark A (along Front Face of Fender) (Typ.)**
- **Composite Lumber 10" x 10" Wales (Typ.):** Mark A1, A2 or A3
- **Plastic Lumber 6" x 10" Deck Support (Typ.):** Mark D (Typ.)
- **Grating similar (Typ.):** Mark E shown, Fiberglass Open
- **4" x 6" Post (Typ.):** Mark D (Typ.)
- **2 & 3 Pile Clusters (Typ.):** 2 sp. @ 6'-4" = 12'-8"
  - 3 sp. @ 5'-3½ = 15'-11½

NOTE:
Lumber Dimensions and may vary depending on Actual Lumber Dimensions.

For View F-F see Sheet 5.
For Sections A-A and B-B see Sheet 4.

CROSS REFERENCES:
FENDER SYSTEM - PRESTRESSED CONCRETE PILES

EXPANDED PARTIAL ELEVATION VIEW

PARTIAL PLAN VIEW (TYPICAL FLARE)
(FLARE AT CONTROL POINT B SHOWN, CONTROL POINTS A, C & D SIMILAR)
(HANDRAIL NOT SHOWN FOR CLARITY)

Navigation Light (See Design Standards Index 21220 for locations & Details)

Composite Lumber 10" x 10"
Wales Mark A (Typ.)
Wastes Mark A1, A2 or A3
Plastic Lumber 6" x 10"
Wales Mark A2
Mark F3, F2 or F3
Composite Lumber 10" x 10"
Mark F4
Plastic Lumber 8" x 8"
Spacer Blocks
Mark B (Typ.)
Plastic Lumber 6" x 10"
4" x 6" Post
Mark D (Typ.)
Plastic Lumber 2" x 12" Decking
Mark E shown, Fiberglass Open
Grating similar (Typ.)

Mark A (along Front Face of Fender) (Typ.)

Composite Lumber 10" x 10" Wales Mark A (along Front Face of Fender) (Typ.)

EXPANDED PARTIAL ELEVATION VIEW
**VIEW F-F** (SHOWING FENDER END WITH CLEARANCE GAUGE)

- **10'-9" (Typ.)**
- **8"**
- **9"**
- **3"**
- **15'-2"**
- **15'-0"**
- **15'-0"**
- **26'-3"**
- **7"**
- **4"**
- **9"**

**SPICE PLATE DETAIL**

- **3/4" Ø Holes (Typ.)**
- **1/2" Stainless Steel Plate**

**PARTIAL VIEW F-F (SHOWING FENDER END; DECKING AND HANDRAIL NOT SHOWN FOR CLARITY)**

- **8" (Typ.)**
- **1'-9" (Typ.)**
- **3 - #10 x 3" Stainless Steel, Decking Screws each end of each Mark E**
- **Plastic Lumber 2" x 12" Decking Mark E shown, Fiberglass Open Grating similar (6" Min. width at turns, placed with 3/4" Min., 1" Max. gap between adjacent boards)**

**CROSS REFERENCES:**

- For Navigation Lights and SCH 80 PVC Electrical Conduit Details see Design Standard Index 21220.
- For View G-G and Clearance Gauge Details see Sheet 4.
- For Detail "B" and location of Section E-E see Sheet 2.
- For location of View F-F see Sheet 1.

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**SECTION E-E**

**TYPICAL FLARED SECTION (8° TURN SHOWN, 4° TURN SIMILAR)**

- **14" Sq. Prestressed Concrete Piles**
- **1" Ø Stainless Steel Threading Bars, Locking Nuts and Washers (Typ.)**
- **10" x 10" Wales Mark A**
- **Composite Lumber**
- **Plastic Lumber 8" x 8" Spacer Block Mark B (Typ.)**
- **Concrete Piles**
- **Prestressed 14" Sq.**

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**SECTION E-E**

**TYPICAL STRAIGHT SECTION**

- **14" Sq. Prestressed Concrete Piles**
- **1" Ø Stainless Steel Threading Bars, Locking Nuts and Washers (Typ.)**
- **10" x 10" Wales Mark A**
- **Composite Lumber**
- **Plastic Lumber 8" x 8" Spacer Block Mark B (Typ.)**
- **Concrete Piles**
- **Prestressed 14" Sq.**

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**FOR CLARITY:**

- **AND HANDRAIL NOT SHOWN (SHOWING FENDER END WITH CLEARANCE GAUGE)**

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**DESCRIPTION:**

- **FENDER SYSTEM - PRESTRESSED CONCRETE PILES**
- **FDOT 2014 DESIGN STANDARDS INDEX NO. 21930 SHEET NO. 5 of 7**

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**REVISED:**

- **07/01/11**
- **07/01/11**

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**REVISION:**

- **NO. 1384430**
- **NO. 8545130**
### Structural Composite Lumber Bill of Materials

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE (NOMINAL)</th>
<th>DIMENSIONS</th>
<th>BOARD FT. PER EACH</th>
<th>QUANTITY</th>
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<tbody>
<tr>
<td>A1</td>
<td>10&quot; X 10&quot; COMPOSITE LUMBER</td>
<td>32'-0&quot; (STRAIGHT)</td>
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<td>266.6</td>
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<tr>
<td>A2</td>
<td>10&quot; X 10&quot; COMPOSITE LUMBER</td>
<td>32'-0&quot;</td>
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<td>266.6</td>
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<tr>
<td>A3</td>
<td>10&quot; X 10&quot; COMPOSITE LUMBER</td>
<td>16'-0&quot;</td>
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<td>133.3</td>
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<td>A4</td>
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<td>16'-0&quot;</td>
<td></td>
<td>133.3</td>
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<tr>
<td>A5</td>
<td>10&quot; X 10&quot; COMPOSITE LUMBER</td>
<td>16'-0&quot;</td>
<td></td>
<td>133.3</td>
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<tr>
<td>A6</td>
<td>10&quot; X 10&quot; COMPOSITE LUMBER</td>
<td>16'-0&quot;</td>
<td></td>
<td>133.3</td>
</tr>
</tbody>
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* All Plastic Lumber and Composite Lumber Dimensions and Quantities shown are based on Nominal Lumber Dimensions and may vary depending on Actual Lumber Dimension.

** Provide fiberglass open grating in lieu of 2" X 12" Plastic Lumber when called for in the Plans. Mounting hardware shall be Stainless Steel, install per Manufacturer's recommendations. See Structures Plans for Notes and Details.

### Plastic Lumber Bill of Materials

<table>
<thead>
<tr>
<th>MARK</th>
<th>SIZE (NOMINAL)</th>
<th>DIMENSIONS</th>
<th>BOARD FT. PER EACH</th>
<th>NO. REQD.</th>
<th>QUANTITY</th>
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<tr>
<td>B</td>
<td>8&quot; X 8&quot; PLASTIC LUMBER</td>
<td>6&quot; (STRAIGHT)</td>
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<td>3.6</td>
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<tr>
<td>C</td>
<td>2&quot; X 6&quot; PLASTIC LUMBER</td>
<td>16'-0&quot; (STRAIGHT)</td>
<td>(Trim &amp; Miter Ends as required)</td>
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<td>16.0</td>
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<tr>
<td>D</td>
<td>4&quot; X 6&quot; PLASTIC LUMBER</td>
<td>6&quot; (STRAIGHT)</td>
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<td>8.7</td>
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<tr>
<td>E</td>
<td>2&quot; X 12&quot; PLASTIC LUMBER</td>
<td>2'-6&quot; (STRAIGHT)</td>
<td>(Miter as required, 6&quot; Min. width)</td>
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<td>5.0</td>
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<td>31'-11&quot;</td>
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<td>PILE CUTOFF ELEV. MINUS NLW OR MINUS LUM B, PLUS 3'-8&quot; (STRAIGHT)</td>
<td></td>
<td>1 F EACH</td>
<td>1.3</td>
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<tr>
<td>N2</td>
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<td>1'-2&quot; (STRAIGHT)</td>
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<td>1.2</td>
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