GENERAL NOTES:

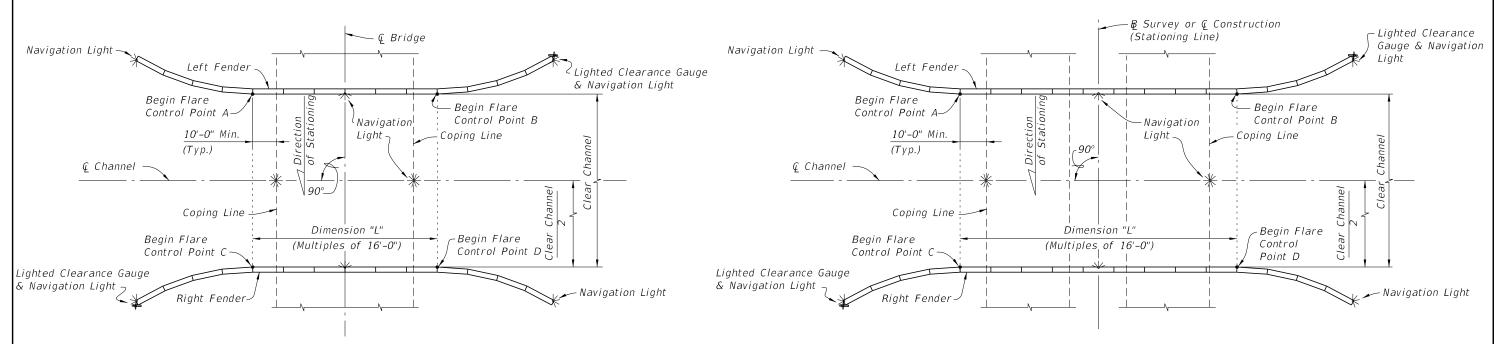
- U.S. COAST GUARD NOTIFICATION: Notify the local office of the U.S. Coast Guard at least 30 days prior to beginning of construction of the Fender System.
- POLYMERIC PILES Provide polymeric piles in accordance with Specification Section 471. Installation shall be in accordance with manufacturer's recommendations. All piles shall be plumb.
- PLASTIC LUMBER AND STRUCTURAL COMPOSITE LUMBER WALES: Provide only Plastic Lumber and Structural Composite Lumber Wales in accordance with Specification Section 973. Wales shall be continuous and spliced 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 $1\frac{1}{2}$ ". Design live loads and deflections shall be a 50 psf uniformly distributed load with a maximum deflection of $\frac{3}{2}$ " or L/120 at the center of a simple span and a concentrated load of 250 pounds with a maximum deflection of $\frac{1}{2}$ " 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 Wales and Deck Supports at a 2'-0" maximum spacing so as to resist pedestrian live loads and uplift forces from wind, buoyancy and wave
- 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 Nuts in accordance with ASTM F594 Type 316. 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.
- SPLICE PLATES: Furnish Splice Plates in accordance with ASTM A240 Type 316.

GENERAL NOTES

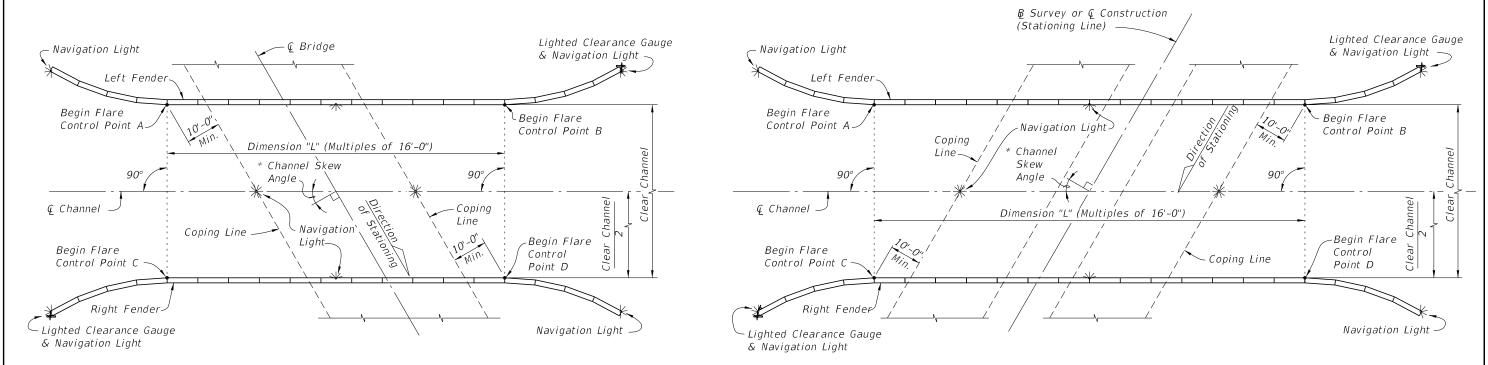
LAST REVISION 01/01/12

DESCRIPTION:





SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF SINGLE FIXED BRIDGE WITH NONSKEWED CHANNEL SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF DUAL FIXED BRIDGES WITH NONSKEWED CHANNEL (PARALLEL DUAL FIXED BRIDGES SHOWN, NONPARALLEL DUAL FIXED BRIDGES SIMILAR)



SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF SINGLE FIXED BRIDGE WITH SKEWED CHANNEL SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF DUAL FIXED BRIDGES WITH SKEWED CHANNEL (PARALLEL DUAL FIXED BRIDGES SHOWN, NONPARALLEL DUAL FIXED BRIDGES SIMILAR)

* See Structures Plans, Plan and Elevation and Foundation Layout Sheets for magnitude and orientation of Channel Skew Angle. 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.

LAYOUT GEOMETRY

LAST REVISION 5

DESCRIPTION:

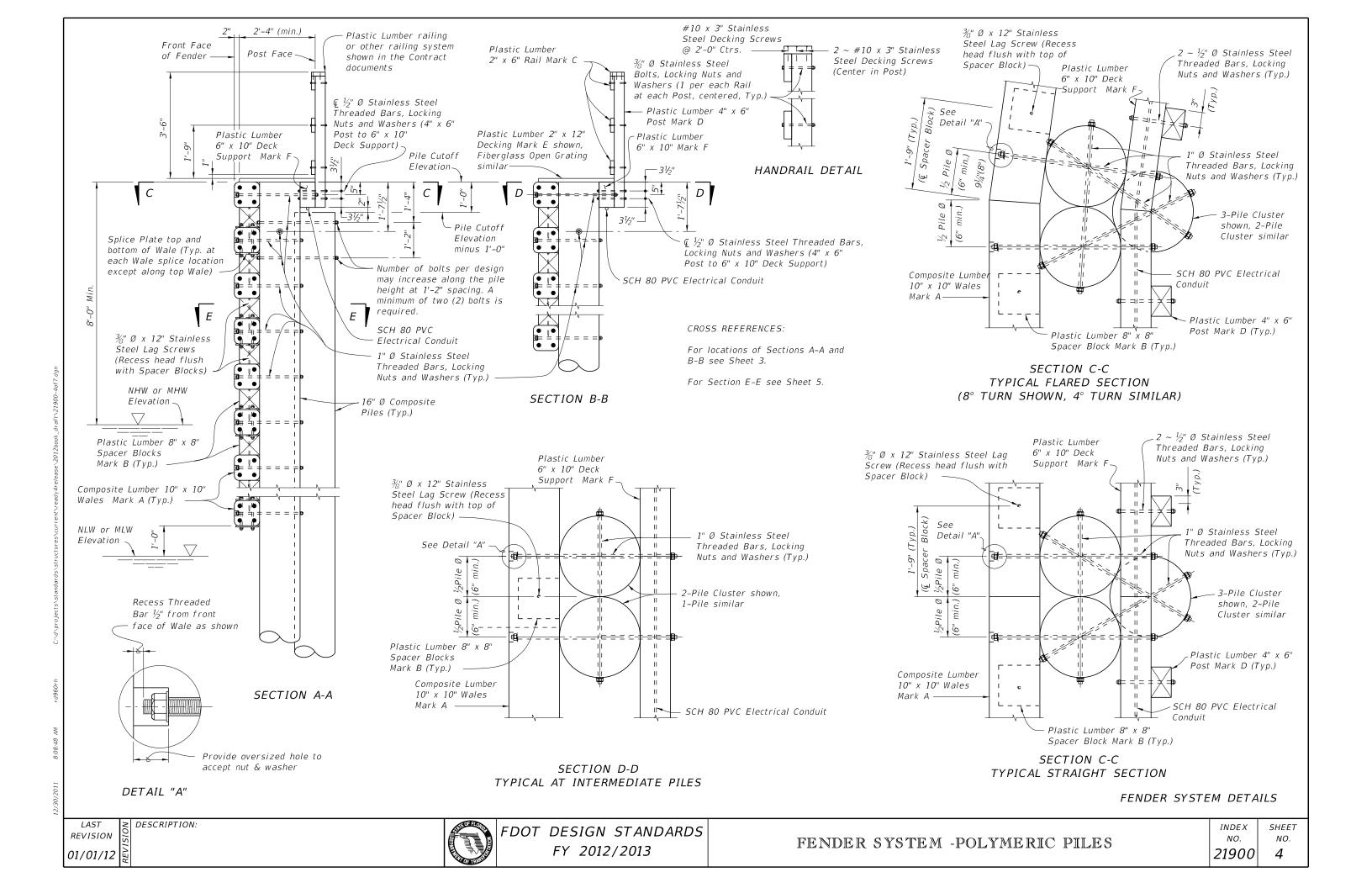


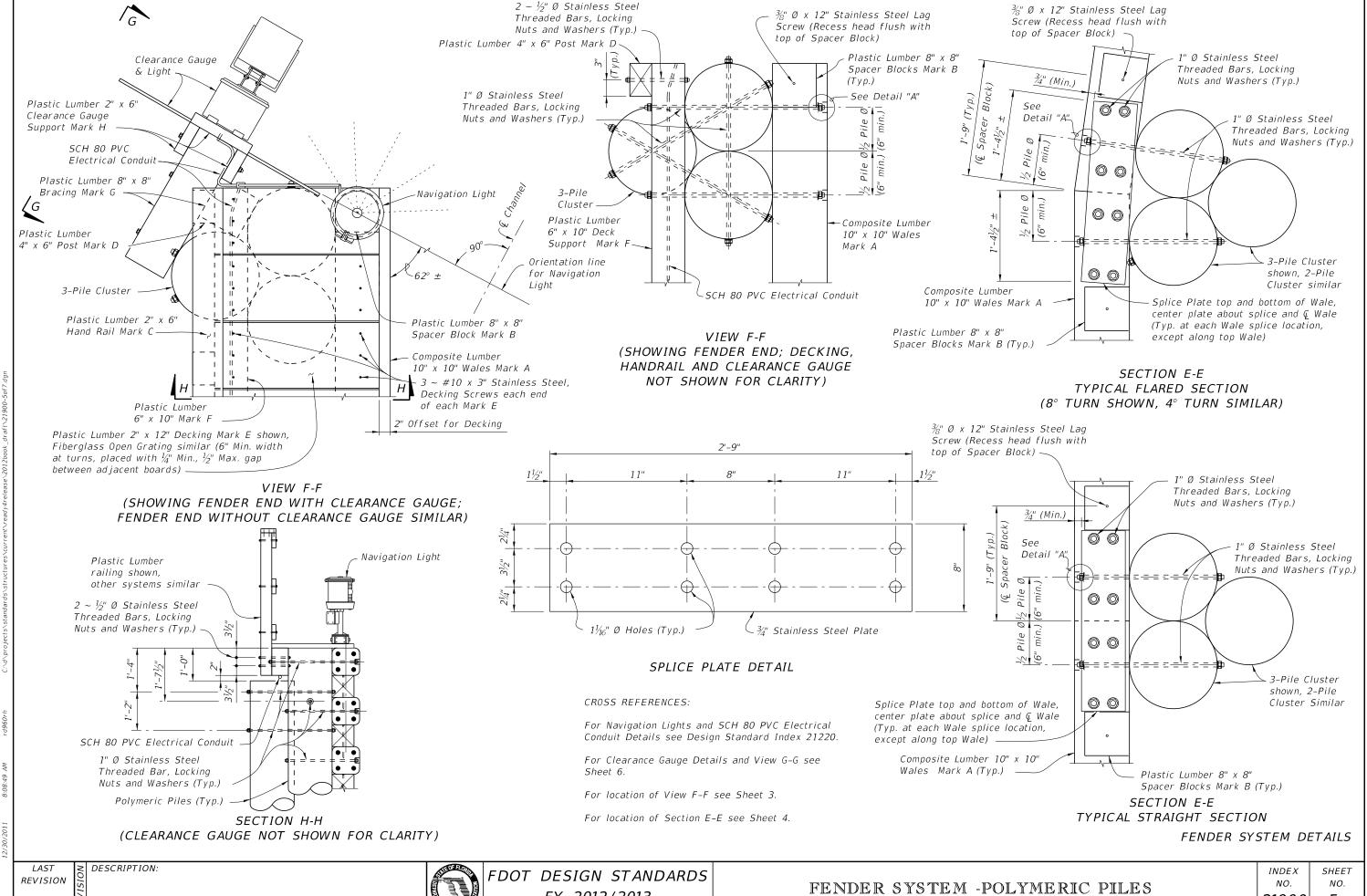
FY 2012/2013

01/01/12

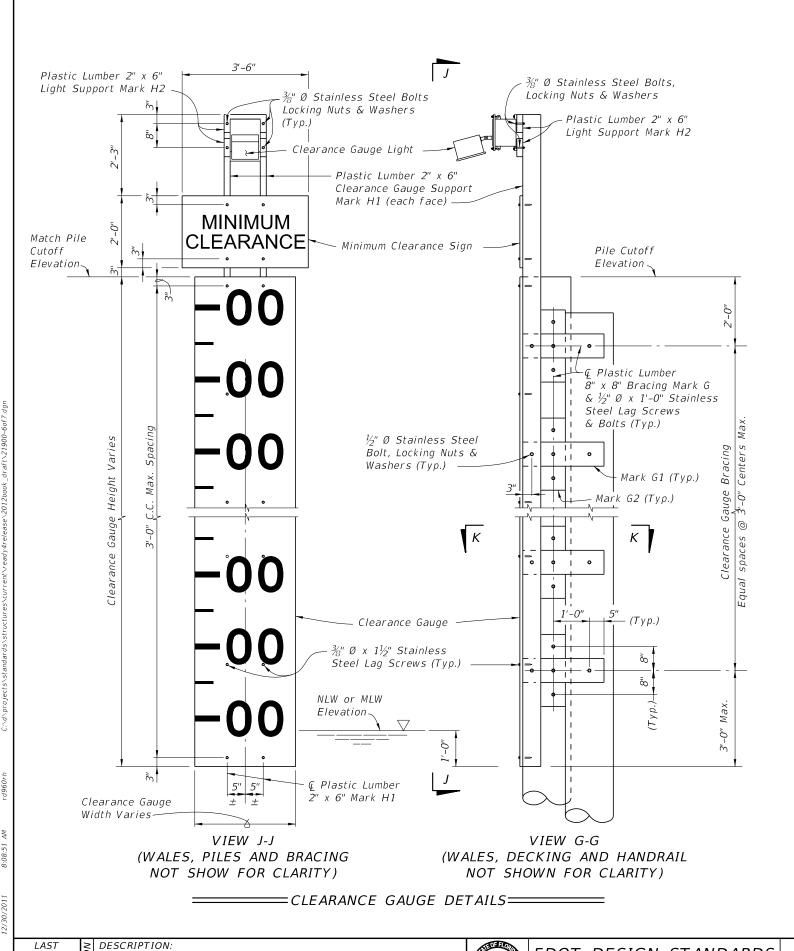
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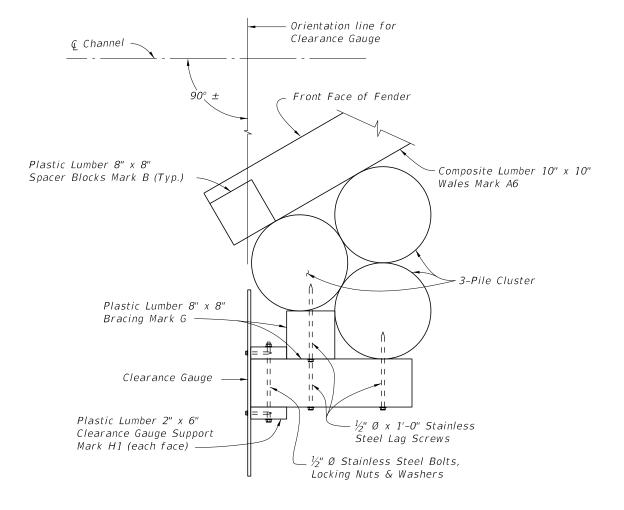
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07/01/11





SECTION K-K

CROSS REFERENCES:

For Structural Composite and Plastic Lumber Bill of Materials Quantities and Fender System Table of Variables see Structures Plans.

For location of View G-G see Sheet 5.

FENDER SYSTEM DETAILS

LAST REVISION SEALS

FDOT DESIGN STANDARDS FY 2012/2013

LAST

REVISION

01/01/12

* STRUCTURAL COMPOSITE LUMBER BILL OF MATERIALS						
MARK	SIZE (NOMINAL)	DIMENSIONS	BOARD FT. PER EACH	NO. REQD.	QUANTITY	
A1	10" X 10" COMPOSITE LUMBER	32'-0" (STRAIGHT)	266.6	mber		
A2	10" X 10" COMPOSITE LUMBER	32'-0"	266.6	Composite and Plastic Lumber ble in Structures Plans		
АЗ	10" X 10" COMPOSITE LUMBER	3/8"-11	133.3			
A4	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	le.	Materials Table	
A5	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	Estimated St Bill of Mad		
A6	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	See		

	* PLASTIC LUMBER BILL OF MATERIALS					
MARK	SIZE (NOMINAL)	DIMENSIONS	BOARD FT. PER EACH	NO. REQD.	QUANTITY	
В	8" X 8" PLASTIC LUMBER	8" (STRAIGHT)	3.6			
С	2" X 6" PLASTIC LUMBER	16'-0" (STRAIGHT) (Trim & Miter Ends as required)	16.0			
D	4" X 6" PLASTIC LUMBER	4'-4" (STRAIGHT)	8.7	See Estimated Structural Composite and Plastic Lumber Bill of Materials Table in Structures Plans		
** E	2" X 12" PLASTIC LUMBER	2'-6" (STRAIGHT) (Miter as required)	5.0			
F 1	6" X 10" PLASTIC LUMBER	32'-0" (STRAIGHT)	160.0			
F2	6" X 10" PLASTIC LUMBER	31'-11"	159.6			
F3	6" X 10" PLASTIC LUMBER	15'-11"	79.6			
F4	6" X 10" PLASTIC LUMBER	15'-91/4"	78.8			
F 5	6" X 10" PLASTIC LUMBER	15'-81/4"	78.4			
F6	6" X 10" PLASTIC LUMBER	15'-101/4"	79.2			
G 1	8" X 8" PLASTIC LUMBER	2'-3" (STRAIGHT)	12.0			
G2	8" X 8" PLASTIC LUMBER	2'-0" (STRAIGHT)	10.7			
H1	2" X 6" PLASTIC LUMBER	PILE CUTOFF ELEV. MINUS NLW OR MLW ELEV. PLUS 5'-6" (STRAIGHT)	1.0 PER LF EACH			
H2	2" X 6" PLASTIC LUMBER	1'-0" (STRAIGHT)	1.0			

NO.

^{*} 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.

- 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 \geq 6). Pile splices and build-ups are not permitted. Use only 14" Square Prestressed Concrete Piles with 8 - 1/3" 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 Wales in accordance with Specification Section 973. Wales shall be continuous and spliced 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 $1\frac{1}{2}$ ". Design live loads and deflections shall be a 50 psf uniformly distributed load with a maximum deflection of 3/8" or L/120 at the center of a simple span and a concentrated load of 250 pounds with a maximum deflection of $\frac{1}{4}$ " 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 Wales and Deck Supports at a 2'-0" maximum spacing so as to resist pedestrian live loads and uplift forces from wind, buoyancy and wave

- 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 Nuts in accordance with ASTM F594 Type 316. 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.

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

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

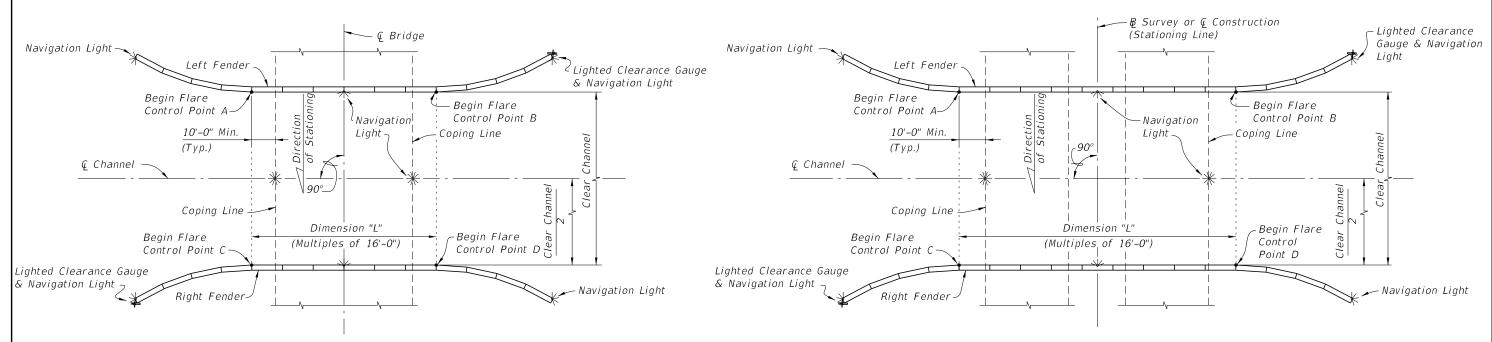
- 1. $\frac{1}{2}$ " diameter 6x19, 6x25 or 6x37 class IWRC Type 316 stainless steel wire rope with a minimum breaking strength of 18,000 lbs.
- 2. $\frac{1}{2}$ " diameter 6x19 galvanized wire rope with ultraviolet ray resistant polypropylene impregnation having an outside diameter of 5/8" with a minimum 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.

FENDER SYSTEM ENERGY CAPACITY: Energy Capacity = 38 ft-k

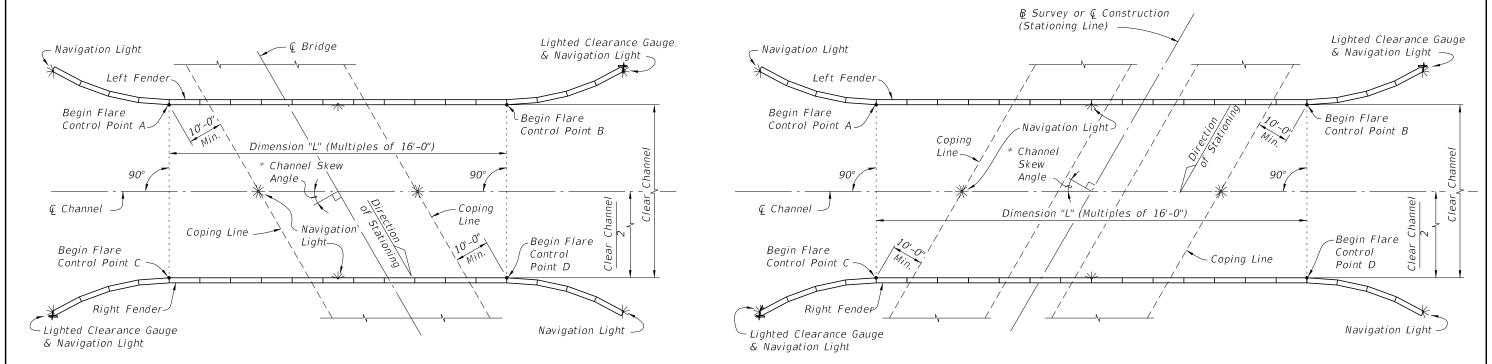
GENERAL NOTES

LAST REVISION 01/01/12 DESCRIPTION:





SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF SINGLE FIXED BRIDGE WITH NONSKEWED CHANNEL SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF DUAL FIXED BRIDGES WITH NONSKEWED CHANNEL (PARALLEL DUAL FIXED BRIDGES SHOWN, NONPARALLEL DUAL FIXED BRIDGES SIMILAR)



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

SCHEMATIC OF FENDER SYSTEM SHOWING TREATMENT OF DUAL FIXED BRIDGES WITH SKEWED CHANNEL (PARALLEL DUAL FIXED BRIDGES SHOWN, NONPARALLEL DUAL FIXED BRIDGES SIMILAR)

* See Structures Plans, Plan and Elevation and Foundation Layout Sheets for magnitude and orientation of Channel Skew Angle. 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.

LAYOUT GEOMETRY

LAST REVISION 5

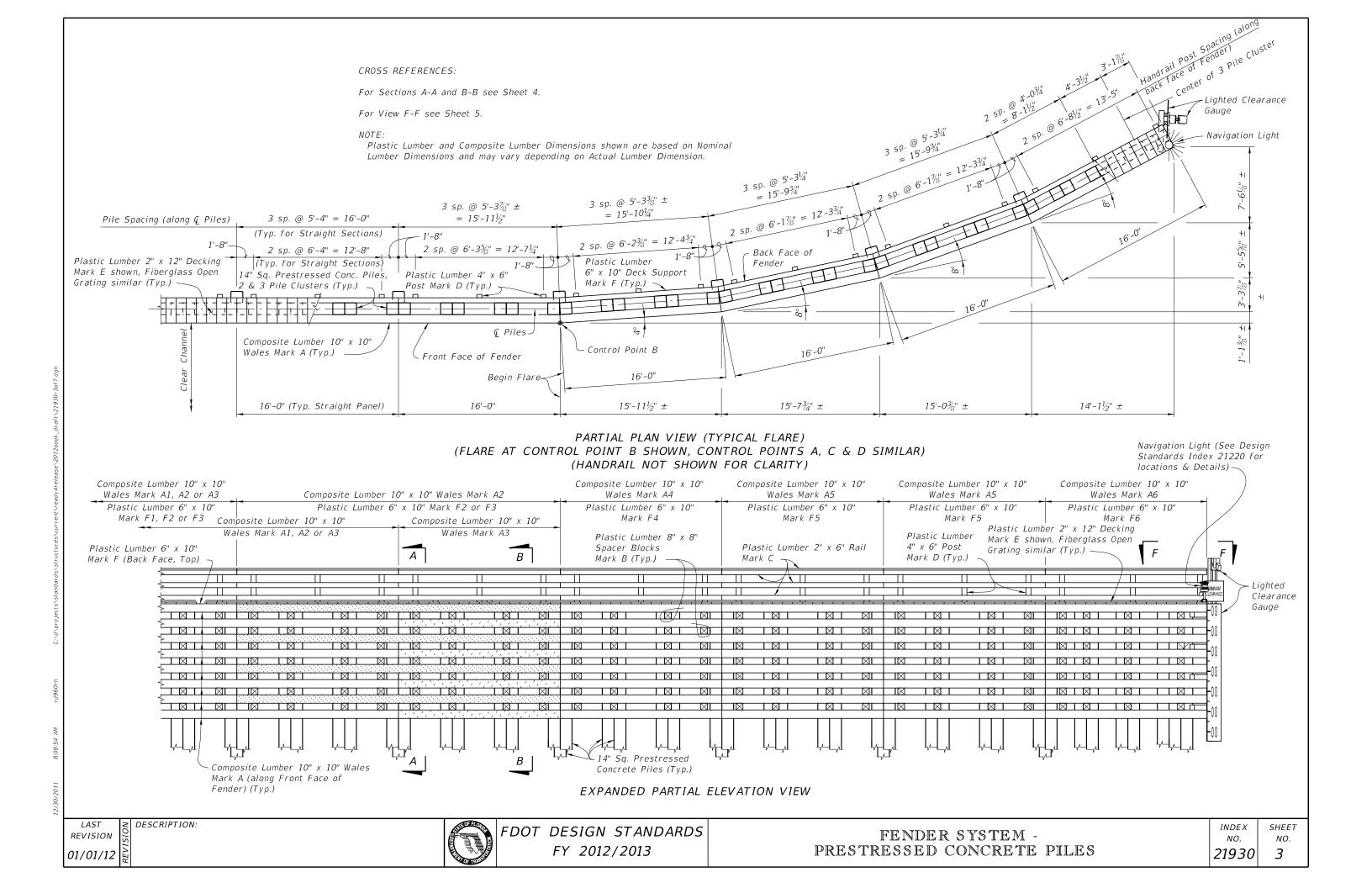
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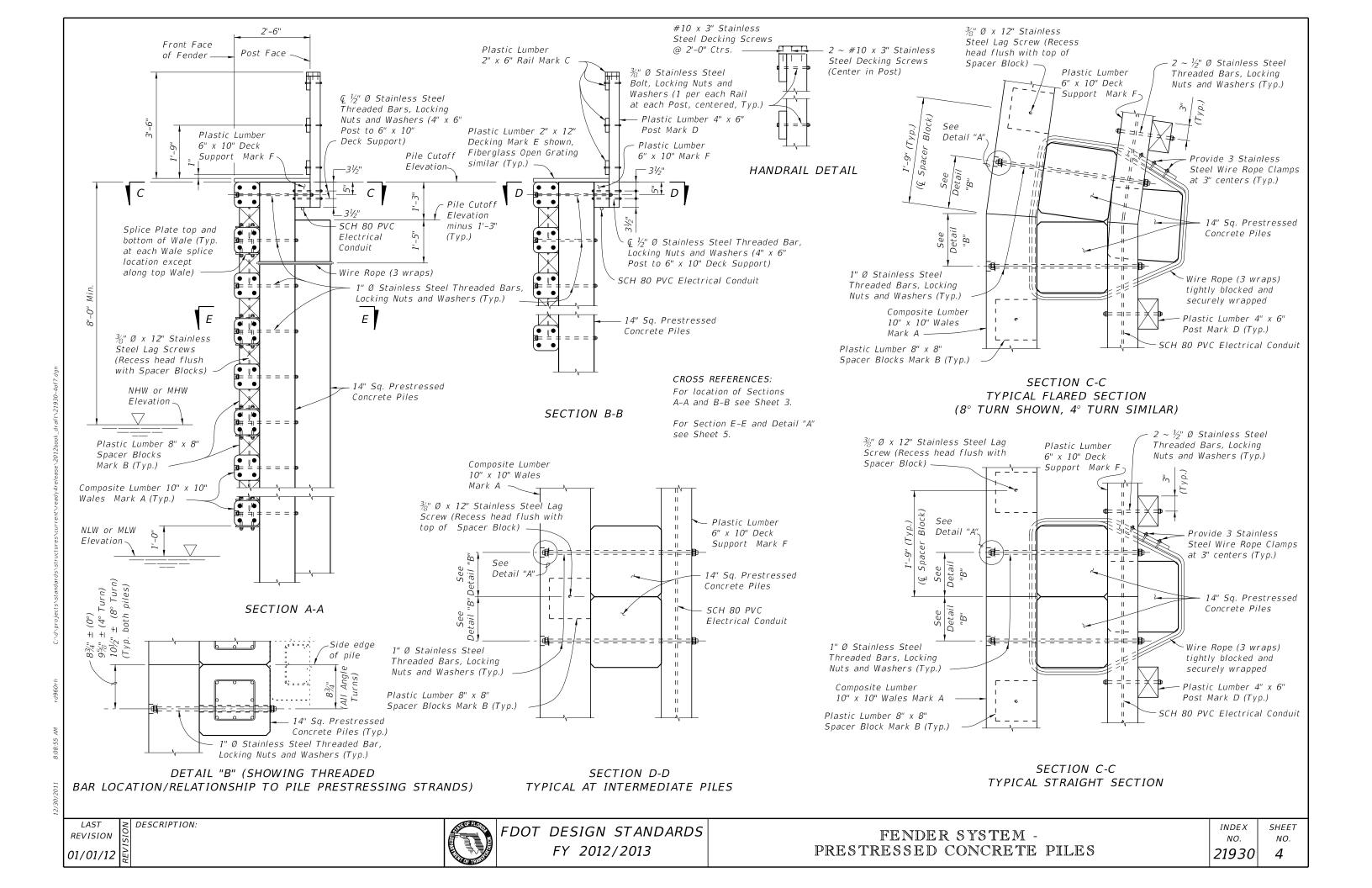


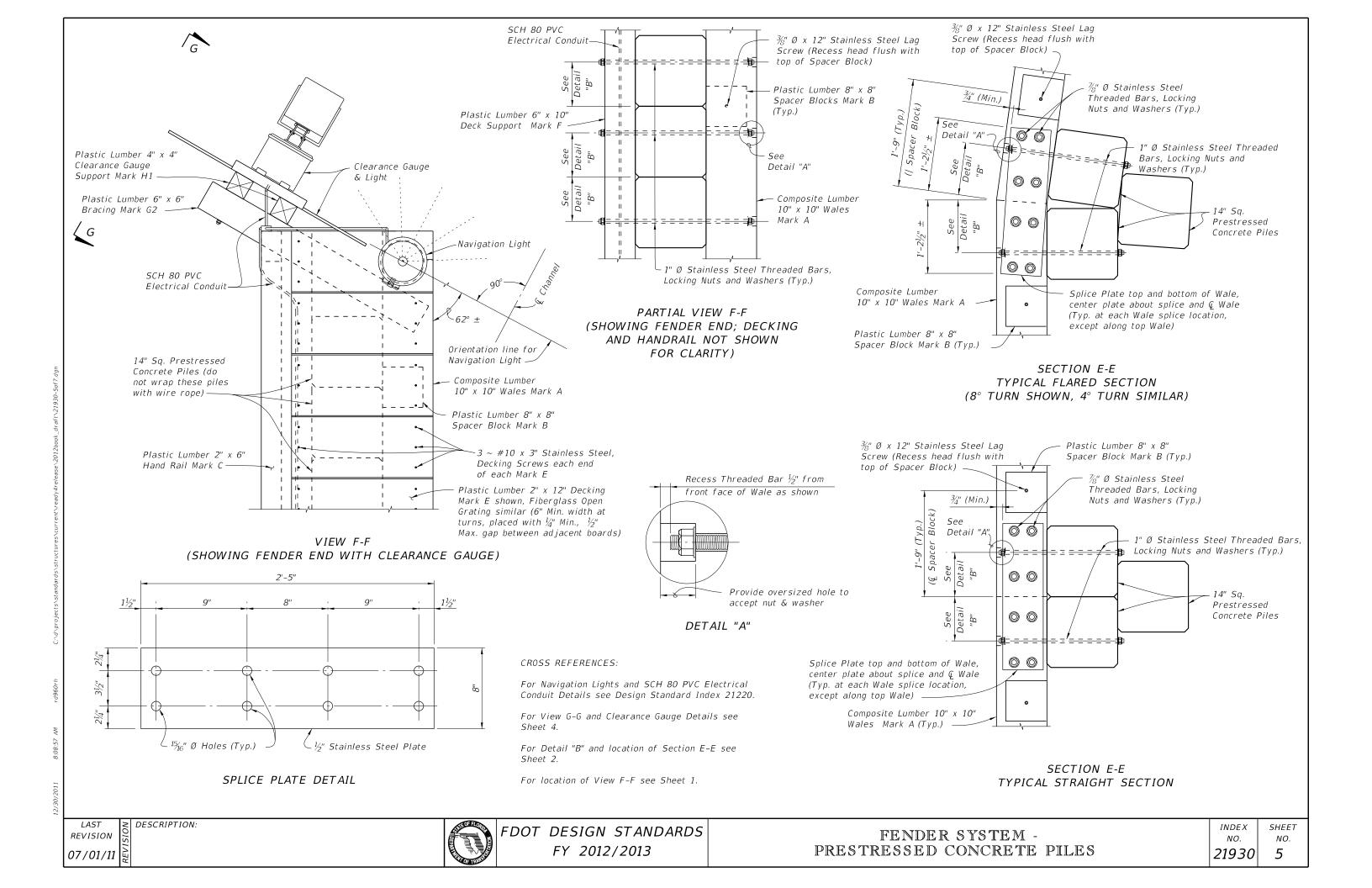
FDOT DESIGN STANDARDS FY 2012/2013

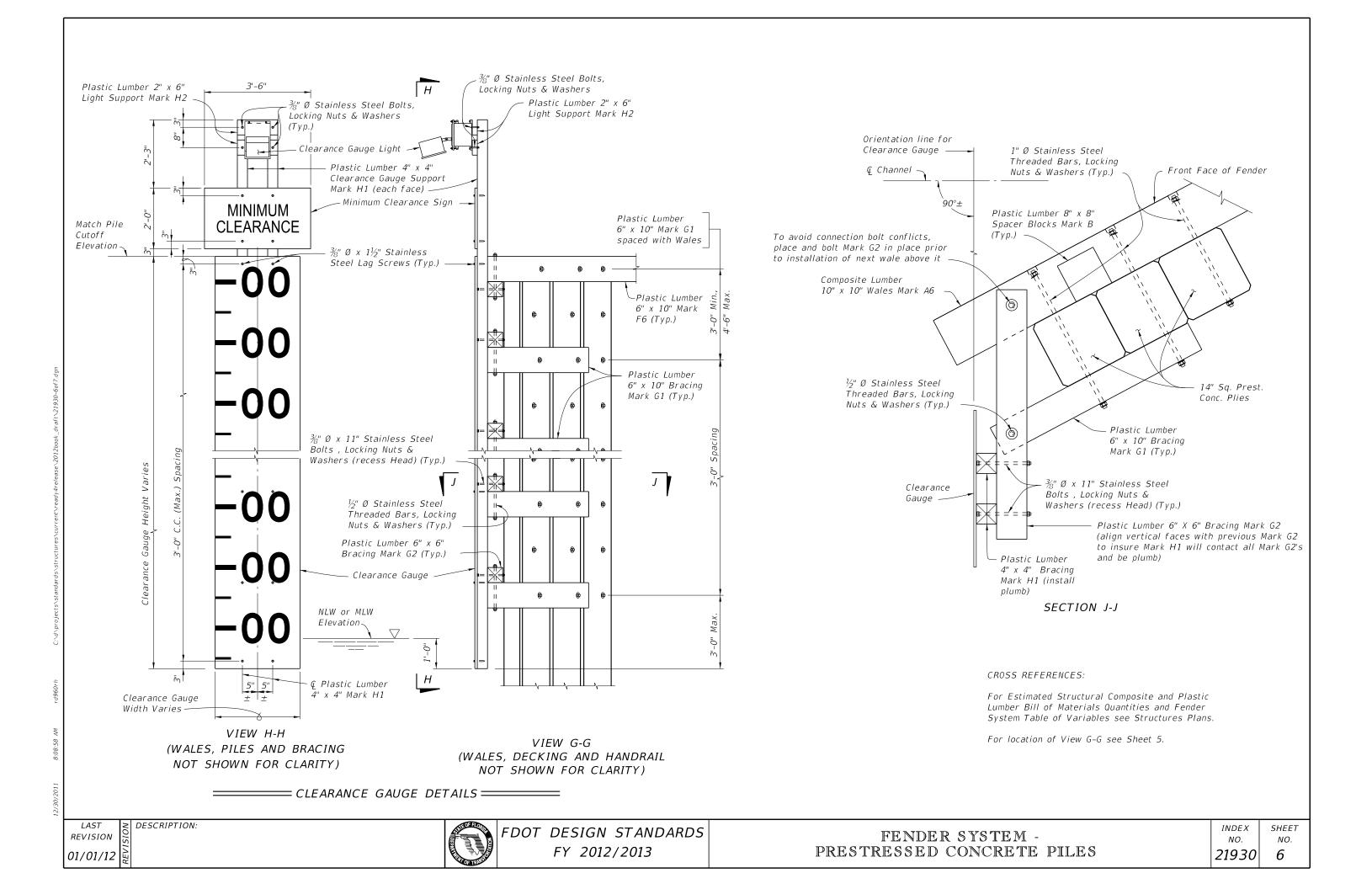
FENDER SYSTEM - PRESTRESSED CONCRETE PILES

INDEX SHEET NO. 21930 2









LAST

REVISION

07/01/11

A1	10" X 10" COMPOSITE LUMBER	32'-0" (STRAIGHT)	266.6	nber
A2	10" X 10" COMPOSITE LUMBER	32'-0"	266.6	Plastic Lunres Plans
A3	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	Estimated Structural Composite and Plastic Lumber Bill of Materials Table in Structures Plans
A4	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	tructural Cc terials Tabl
A5	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	Estimated S Bill of Ma
A6	10" X 10" COMPOSITE LUMBER	16'-0"	133.3	See

STRUCTURAL COMPOSITE LUMBER BILL OF MATERIALS

DIMENSIONS

BOARD FT.

PER EACH

QUANTITY

REQD.

SIZE (NOMINAL)

MARK

	* PLASTIC LUMBER BILL OF MATERIALS						
MARK	SIZE (NOMINAL)	DIMENSIONS	BOARD FT. PER EACH	NO. REQD.	QUANTITY		
В	8" X 8" PLASTIC LUMBER	8" (STRAIGHT)	3.6				
С	2" X 6" PLASTIC LUMBER	16'-0" (STRAIGHT) (Trim & Miter Ends as required)	16.0				
D	4" X 6" PLASTIC LUMBER	4'-4" (STRAIGHT)	8.7				
** E	2" X 12" PLASTIC LUMBER	2'-6" (STRAIGHT) (Miter as required, 6" Min. width)	5.0				
F 1	6" X 10" PLASTIC LUMBER	32'-0" (STRAIGHT)	160.0	Estimated Structural Composite and Plastic Lumber Bill of Materials Table in Structures Plans			
F2	6" X 10" PLASTIC LUMBER	31'-11"	159.6				
F3	6" X 10" PLASTIC LUMBER	15'-11"	79.6				
F4	6" X 10" PLASTIC LUMBER	15'-91/4"	78.8	itructural Co	iterials Tabl		
F5	6" X 10" PLASTIC LUMBER	15'-81/4"	78.4	Estimated S	Bill of Materials		
F6	6" X 10" PLASTIC LUMBER	15'-101/4"	79.3	See			
G 1	6" X 10" PLASTIC LUMBER	3'-8" (STRAIGHT)	18.3				
G2	6" X 6" PLASTIC LUMBER	4'-1" (STRAIGHT)	12.3				
Н1	4" X 4" PLASTIC LUMBER	PILE CUTOFF ELEV. MINUS NLW OR MLW ELEV. PLUS 5'-6" (STRAIGHT)	1.3 PER LF EACH				
H2	2" X 6" PLASTIC LUMBER	1'-2" (STRAIGHT)	1.2				

^{*} 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.