



BILL OF MATERIALS						
Pipe DIAMETER (in.)			15	18	21	24
ITEM	SIZE	QUANTITY	Item Length for pipe Diameters			
Piles*	8" Diam.	2				
Headers	2"x4"	1	3'8"	4'8"	4'8"	4'8"
Beams	2"x6"	2	3'8"	4'8"	4'8"	4'8"
Braces	2"x4"	2	3'0"	3'6"	3'7"	3'8"
Bolts w/ Nuts	5/8" Diam.	4	6"	6"	6"	6"
Bolts w/ Nuts	5/8" Diam.	8	12"	12"	12"	12"
Bolts w/ Nuts	5/8" Diam.	4	12"	12"	12"	12"
Washers, Flat	5/8"	32				

*NOTE: Enter actual length of piling based on site conditions.

BILL OF MATERIALS						
Pipe DIAMETER (in.)			8	10	12	
ITEM	SIZE	QUANTITY	Item Length for pipe Diameters			
Piles*	8" Diam.	2				
Headers	2"x4"	1	3'8"	3'8"	3'8"	
Beams	2"x4"	2	3'8"	3'8"	3'8"	
Braces	2"x4"	2	2'1"	2'8"	2'9"	
Bolts w/ Nuts	5/8" Diam.	4	6"	6"	6"	
Bolts w/ Nuts	5/8" Diam.	8	12"	12"	12"	
Bolts w/ Nuts	5/8" Diam.	4	12"	12"	12"	
Washers, Flat	5/8"	32				

*NOTE: Enter actual length of piling based on site conditions.

BILL OF MATERIALS						
Pipe DIAMETER (in.)			42	48		
ITEM	SIZE	QUANTITY	Item Length			
Piles*	11" Diam.	2				
Headers	2"x8"	1	7'11"	7'11"		
Beams	2"x12"	2	7'11"	7'11"		
Braces	2"x8"	2	6'2"	6'5"		
Bolts w/ Nuts	5/8" Diam.	8	6"	6"		
Bolts w/ Nuts	5/8" Diam.	8	17"	17"		
Bolts w/ Nuts	5/8" Diam.	8	17"	17"		
Washers, Flat	5/8"	40				

*NOTE: Enter actual length of piling based on site conditions.

BILL OF MATERIALS						
Pipe DIAMETER (in.)			30	36		
ITEM	SIZE	QUANTITY	Item Length			
Piles*	11" Diam.	2				
Headers	2"x6"	1	6'11"	6'11"		
Beams	2"x8"	2	6'11"	6'11"		
Braces	2"x6"	2	4'11"	5'1"		
Bolts w/ Nuts	5/8" Diam.	6	6"	6"		
Bolts w/ Nuts	5/8" Diam.	8	17"	17"		
Bolts w/ Nuts	5/8" Diam.	6	17"	17"		
Washers, Flat	5/8"	40				

*NOTE: Enter actual length of piling based on site conditions.

NOTES AND SPECIFICATIONS

- For Detail M, Detail N, and Detail P refer to FL-410B2
- Lumber shall be southern Pine (unfinished surface), No. 2 Dense (MC=19) in conformance with the latest edition of grading rules by the Southern Pine Inspection Bureau.
- Washers shall be circular cut washers conforming to the requirements of A.S.T.M. Specification A-36. Bolts shall conform to A.S.T.M. Specification A-307. Bolts, nuts, and washers shall be hot dip zinc coated in accordance with requirements of class C, A.S.T.M. Specification A-153, or stainless steel class 304 or 314. Bolts shall have a 6 inch minimum thread length.
- Timber piles shall meet the requirements of ASTM D25 and shall be class B southern yellow pine.
- Timber piles and timber members shall be pressure treated in conformance with ASTM D 1760. Prescribed treatment shall be stated in the specifications.
- Bracing shall be placed against and bolted tangent to the pipe.
- The piles may be either:
 - Set butt up, in drilled holes which have a diam. at least 9" larger than the top of the pile. Backfill may be with earth placed in 6" layers and thoroughly tamped or with concrete well rodded to a dense mass. The hole shall be filled to the ground line.
 - Driven to the specified depth by methods and procedures approved by the Engineer.

TABLE OF DIMENSIONS												
Pipe Diameter (in.)		8	10	12	15	18	21	24	30	36	42	48
A	Feet	3'-0"	3'-0"	3'-0"	3'-0"	4'-0"	4'-0"	4'-0"	6'-0"	6'-0"	7'-0"	7'-0"
B	Feet	2'-7"	2'-8"	2'-9"	3'-0"	3'-6"	3'-7"	3'-8"	4'-11"	5'-1"	6'-2"	6'-5"
C	Inches	5"	5"	5"	5"	5"	5"	5"	8"	8"	8"	8"

Pipe Outlet Support Details
 Standard DWG. No. FL-410B1
 Date 3/16/2011 Sheet 1 of 2

Revisions		
Date	Approved	Title
07/11	JT Wilson	ST Con Eng

Date _____
 Designed _____
 Drawn _____
 Checked _____
 Approved _____

Pipe Outlet Support Details



File No. FL-410B1.dwg
 Drawing No. _____
 Date 3/16/2011
 Sheet ___ of ___