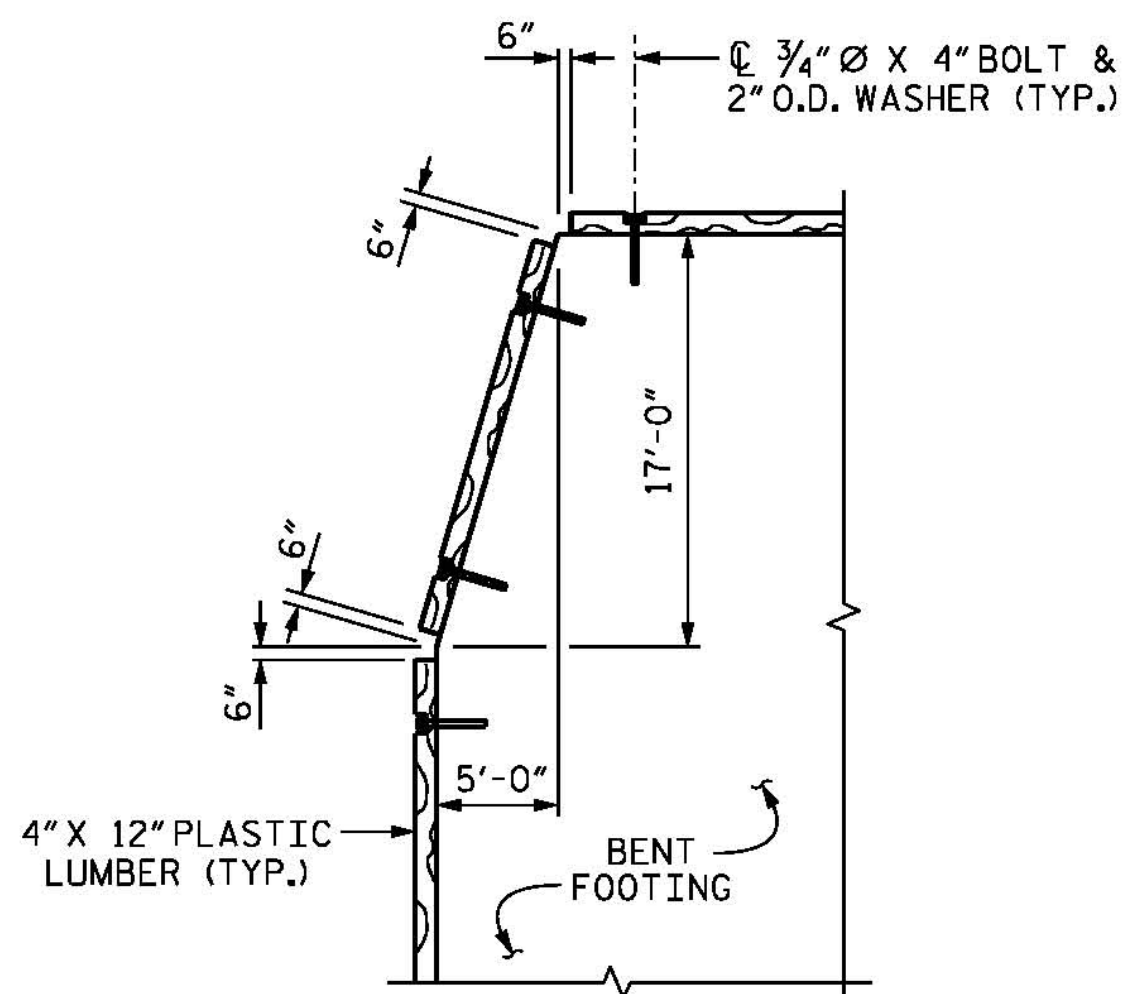
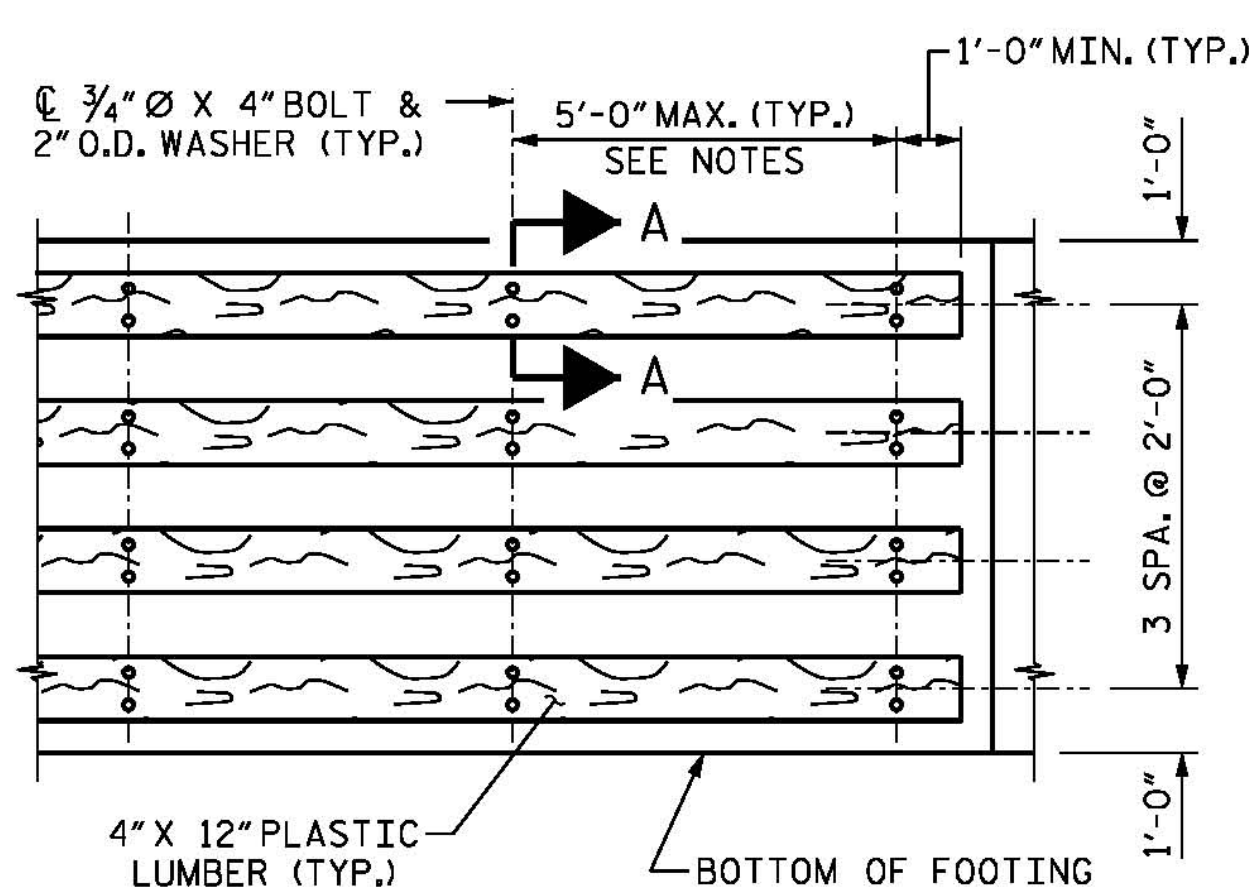


**CHANNEL BENT FOOTING LAYOUT**

BENT 14 SHOWN, BENT 15 SIMILAR  
BENT COLUMNS AND DRILLED PIERS NOT SHOWN FOR CLARITY.  
SEE BENT DRAWINGS FOR SIZE OF FOOTINGS.

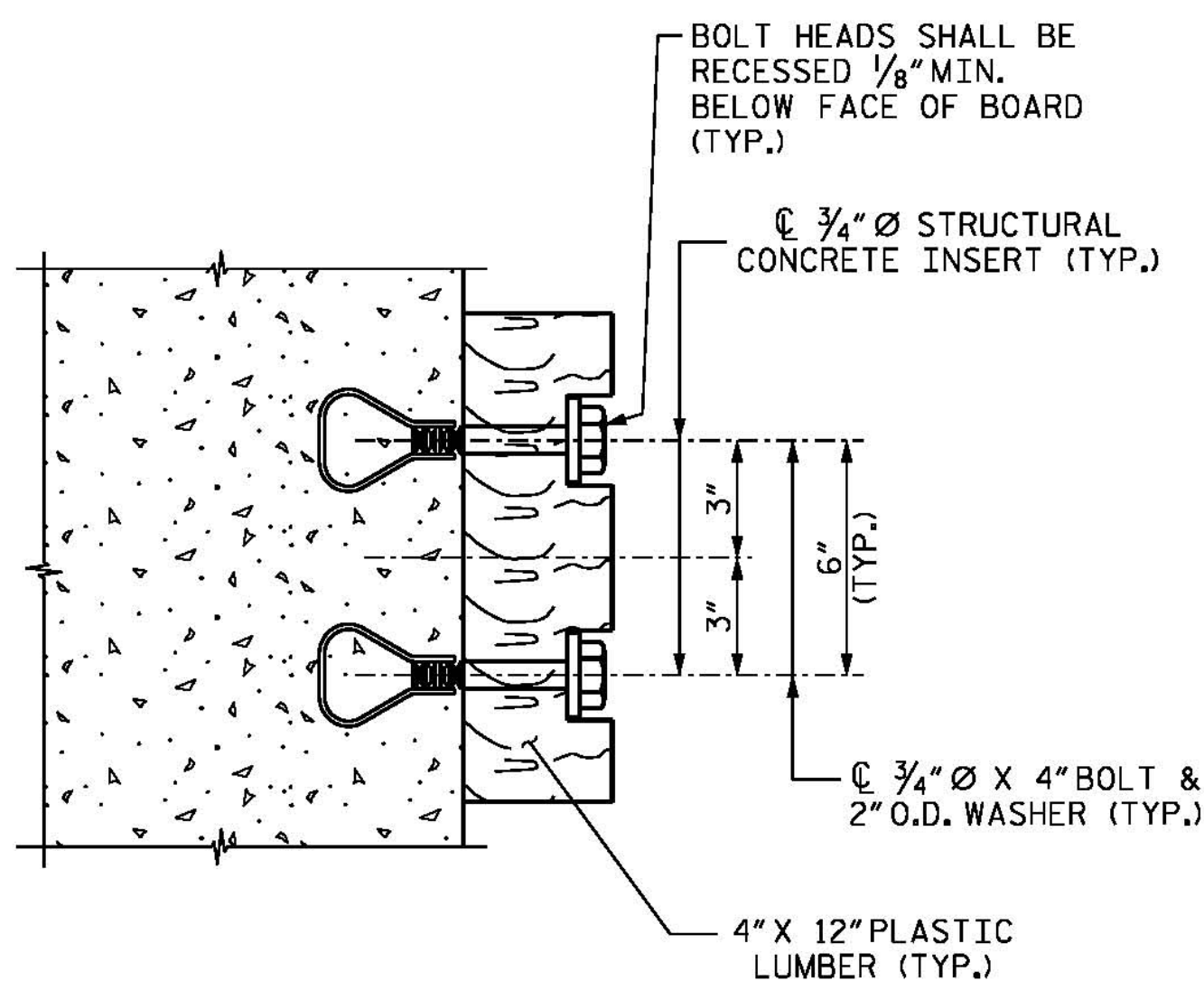


**TYPICAL CORNER DETAIL**

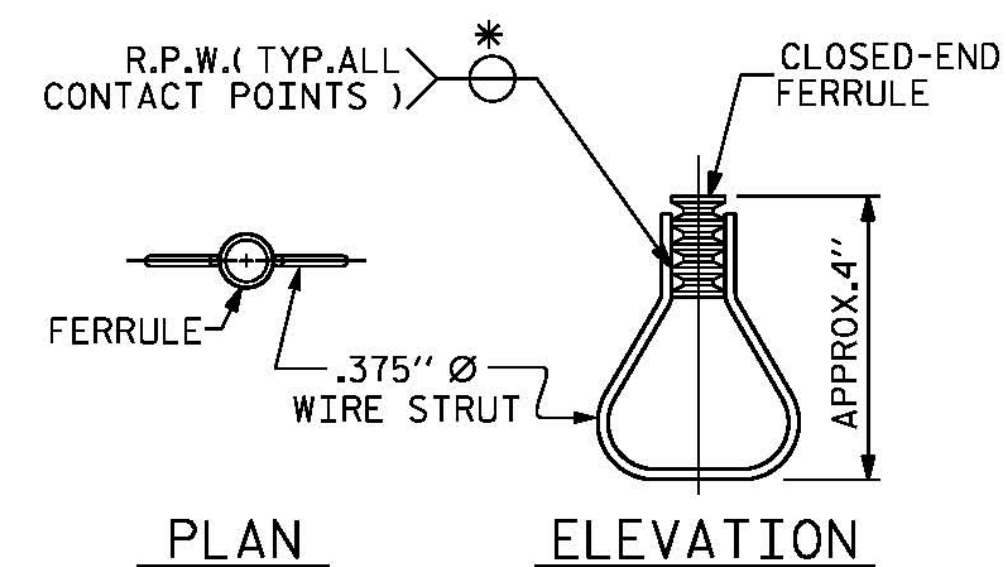


**ELEVATION**

TYPICAL FOR ALL FACES OF FOOTING  
INCLUDING CHAMFERED FACES. PLASTIC  
LUMBER FENDER BOARDS NOT SHOWN ON  
OTHER FACES FOR CLARITY.



**SECTION A-A**



**STRUCTURAL CONCRETE INSERT**

\* EACH WELDED ATTACHMENT OF WIRE TO  
FERRULE SHALL DEVELOP THE TENSILE  
STRENGTH OF THE WIRE.

**NOTES**

PLASTIC LUMBER FENDER SYSTEM SHALL BE USED AT FOOTINGS FOR BENTS 14 AND 15 ONLY.

THE STRUCTURAL CONCRETE INSERT ASSEMBLY SHALL CONSIST OF THE FOLLOWING COMPONENTS:

- A. FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF AASHTO M169, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 1 1/2".
- B. 1 - 3/4" Ø X 4" BOLT WITH WASHER. BOLT SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLT AND WASHER SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLT AND WASHER MAY BE USED AS AN ALTERNATE FOR THE 3/4" Ø X 4" GALVANIZED BOLT AND WASHER. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)
- C. WIRE STRUT SHOWN IN THE CONCRETE INSERT ASSEMBLY DETAIL IS THE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 PSI. AS AN OPTION, A 7/16" Ø WIRE STRUT WITH A MINIMUM TENSILE STRENGTH OF 90,000 PSI IS ACCEPTABLE.

EACH PLASTIC LUMBER BOARD SHALL NOT EXCEED 16'-0" IN LENGTH AND SHALL CONTAIN AT LEAST THREE SETS OF FASTENERS SPACED AT A MAXIMUM OF 5'-0"

THE 3/4" STRUCTURAL CONCRETE INSERT WITH BOLT SHALL BE ASSEMBLED IN THE SHOP.

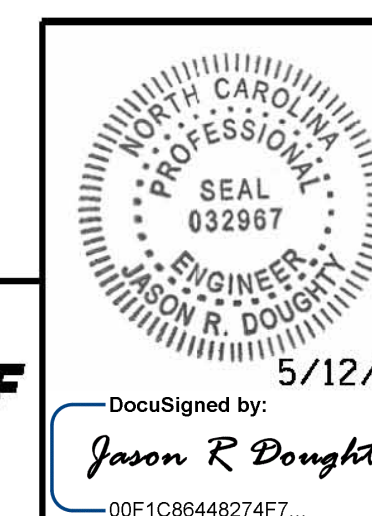
THE COST OF THE 3/4" STRUCTURAL CONCRETE INSERT ASSEMBLY COMPLETE IN PLACE SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.

THE CONTRACTOR, AT HIS OPTION, MAY USE AN ADHESIVE BONDING SYSTEM IN LIEU OF THE STRUCTURAL CONCRETE INSERT EMBEDDED IN THE BENT FOOTING. IF THE ADHESIVE BONDING SYSTEM IS USED, THE 3/4" Ø X 4" BOLT WITH WASHER SHALL BE REPLACED WITH A 3/4" Ø X 6 1/2" BOLT AND 2" O.D. WASHER. ALL SPECIFICATIONS THAT APPLY TO THE 3/4" Ø X 4" BOLT SHALL APPLY TO THE 3/4" Ø X 6 1/2" BOLT. FIELD TESTING OF THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

PLASTIC LUMBER DIMENSIONS SHOWN ARE BASED ON NOMINAL LUMBER DIMENSIONS AND MAY VARY DEPENDING ON ACTUAL LUMBER DIMENSIONS.

FOR PLASTIC LUMBER BOARDS AT CHANNEL BENTS, SEE SPECIAL PROVISIONS.

PROJECT NO. B-4929  
PENDER COUNTY  
STATION: 38+13.81 -L2-



**PARSONS BRINCKERHOFF**  
434 FAYETTEVILLE STREET  
SUITE 1500  
RALEIGH, NC 27601  
LICENSE NO. F-0165

DocuSigned by:  
*Jason R Doughty*  
00F1C86448274F7...

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE  
**PLASTIC LUMBER  
FENDER SYSTEM**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			278
2			4			

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

5/11/2016 400\_405\_B4929\_SMU\_PLFS.dgn

DESIGNED BY: J. DOUGHTY DATE: JAN 2016  
DRAWN BY: K. WHITE DATE: JAN 2016  
CHECKED BY: B. LOFLIN DATE: MAR 2016  
DESIGN ENGINEER OF RECORD: J. DOUGHTY DATE: MAY 2016