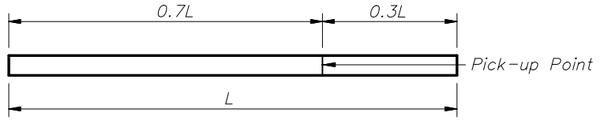
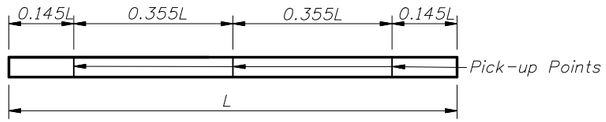


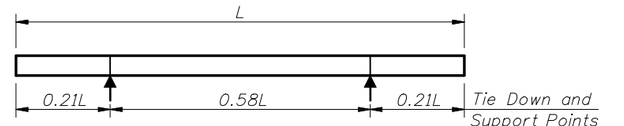

1-POINT PICK-UP

2-POINT PICK-UP

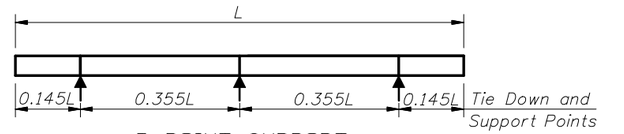



3-POINT PICK-UP

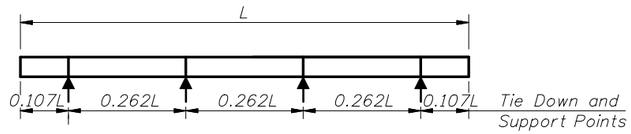
PILE PICK-UP DETAILS




2-POINT SUPPORT



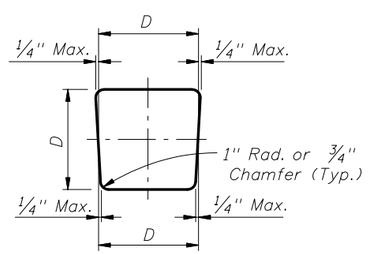

3-POINT SUPPORT



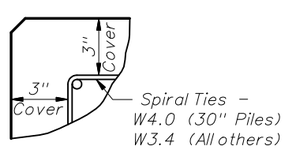

4-POINT SUPPORT

STORAGE AND TRANSPORTATION SUPPORT DETAILS

| TABLE OF MAXIMUM PILE PICK-UP AND SUPPORT LENGTHS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | D = Square Pile Size (inches) | | | | | | Required Storage and Transportation Detail | Pick-Up Detail |
| | 12 | 14 | 18 | 20 | 24 | 30 | | |
| Maximum Pile Length (Feet) | 48 | 52 | 59 | 62 | 68 | 87 | 2, 3, or 4 point | 1 Point |
| | 69 | 75 | 85 | 89 | 98 | 124 | 2, 3, or 4 point | 2 Point |
| | 99 | 107 | 121 | 128 | 140 | 178 | 3 or 4 point | 3 Point |




TYPICAL PILE SHAPE
FOR MOLD FORMS




DETAIL SHOWING
TYPICAL COVER

## PRESTRESSED CONCRETE PILE NOTES:

DESIGN SPECIFICATIONS:

Florida Department of Transportation (FDOT) "Structures Design Guidelines", current edition.

American Association of State Highway and Transportation Officials (AASHTO) "LRFD Bridge Design Specifications", current edition.

DESIGN PARAMETERS:

Square Prestressed Concrete Section: Designed for 1,000 psi uniform compression after prestress losses without loads.

Pick-up, Storage, and Transportation: 0.0 psi tension using a factor of 1.5 times pile self weight.

SPIRAL TIES:

Each wrap of spirals shall be tied to at least two corner strands. One turn required for spiral splices.

CONCRETE CLASS:

Concrete for all piles shall be Class V (Special) except designated High Capacity Piles shall be Class VI.

Concrete for the High Capacity Collar Splice shall be Class V (Special).

See "GENERAL NOTES" in Structures Plans for any specific locations where the use of Silica Fume is required.

CONCRETE STRENGTH:

The pile cylinder strength shall be 6,000 psi minimum at 28 days and 4,000 psi minimum at time of transfer of the Prestressing Force. The cylinder strength for designated High Capacity Piles shall be 8,500 psi minimum at 28 days and 6,500 psi minimum at time of transfer of the Prestressing Force.

SPLICE BONDING MATERIAL:

The material to fill dowel holes and form the joint between pile sections shall be a Type B Epoxy Compound in accordance with Section 926 of the Specifications and shall be contained on the Qualified Products List (QPL). Use Epoxy Bonding Compound or Epoxy Mortar as recommended by the Manufacturer. For Epoxy Mortar only use sand or other filler material supplied by the manufacturer and in the proportions recommended.

PICK-UP POINTS:

Piles shall be marked at the pick-up points to indicate proper points for attaching handling lines.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60, except that spiral ties shall be manufactured from cold-drawn steel wire meeting the requirements of ASTM A82.

PRESTRESSING STEEL:

Prestressing steel shall be seven-wire strand, Grade 270 or 250 as noted.
SR = Stress Relieved Strand
LRS = Low-Relaxation Strand

2008 FDOT Design Standards

# NOTES AND DETAILS FOR SQUARE PRESTRESSED CONCRETE PILES

| Last Revision | Sheet No. |
|---|---|
| 07/01/07 | 1 of 1 |

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