

FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	472-82721	1997	C99	131

SPECIFICATIONS: Standard Specifications for State Road and Bridge Construction as currently used by the Kansas Department of Transportation (Ed. 1990). The following items are covered in Division 700 of the Standard Specifications:

CONCRETE: Concrete for cast-in-place shall be $f'c = 3,000$ PSI. Concrete for prestressed shall be $f'c = 5,000$ PSI.

WELDING: All field welding shall meet the requirements of the Standard Specifications.

TEST PILES: Test piles shall be driven where called for on the bridge plans. The test piles located within the limits of the substructure will become a part of the bridge pile system.

SPLICES: Splices for steel piles and shell piling shall be in accordance with details shown on this sheet and the Standard Specifications.

Prestressed concrete pile splices shall be made in accordance with the Manufacturer's recommendations subject to the approval of the Engineer.

DRIVING FORMULA: Driving formula shall conform to the Standard Specifications.

MEASUREMENT AND PAYMENT: Measurement and payment for all piles shall comply with the Standard Specifications.

The following items are covered in Division 1000 of the Standard Specifications:

REINFORCEMENT: Reinforcing bars shall be new billet steel, ASTM A 615, Grade 40 or Grade 60. Hoops and spirals may be either plain or deformed bars.

PRESTRESSING STEEL: Prestressed strand shall be Grade 270 uncoated seven-wire stress relieved or low relaxation strand.

CAST-IN-PLACE SHELLS: Steel shells for cast-in-place piles shall conform to the requirements of the Standard Specifications.

All piles driven without a mandrel shall be of the minimum thicknesses shown. Piles driven with a mandrel shall be of sufficient strength and thickness to withstand driving without injury and to resist harmful distortion and/or buckling due to soil pressure after the mandrel is removed.

Improperly driven, broken or otherwise defective pipe pile shall be removed and replaced or otherwise corrected to the satisfaction of the Engineer, or an additional pile shall be driven at no extra cost.

The Contractor shall maintain a light suitable for visual inspection of the pile on the Job at all times prior to and during the filling of the pipe.

STEEL PILE: Steel pile shall conform to the requirements of the Standard Specifications.

PILE POINTS: Pile points shall conform to the dimensions shown and to requirements of the Standard Specifications. Pile points shall be welded to the pile.

PAINT: All paint shall comply with the Standard Specifications, or as specified on the plans.

MILL TEST REPORTS: Steel piles test reports and steel shell test reports shall comply with the Standard Specifications.

3	3-1-94	Add pile point details	LRR	KFH
2	10-13-93	Change titles to match bid items	LRR	KFH
1	2-14-90	Revise notes.	LRR	KFH
NO.	DATE	REVISIONS	BY	APP'D

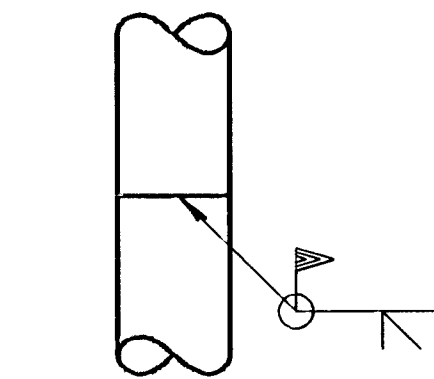
KANSAS DEPARTMENT OF TRANSPORTATION

STANDARD PILE DETAILS

BRIIO				
FHWA APPROVAL	3-16-94	APP'D	KENNETH F. HURST	
DESIGNED	DETAILED	ROR QUANTITIES	TRACED	
DESIGN CK.	DETAIL CK.	KOOIQUAN.CK.	TRACE CK.	

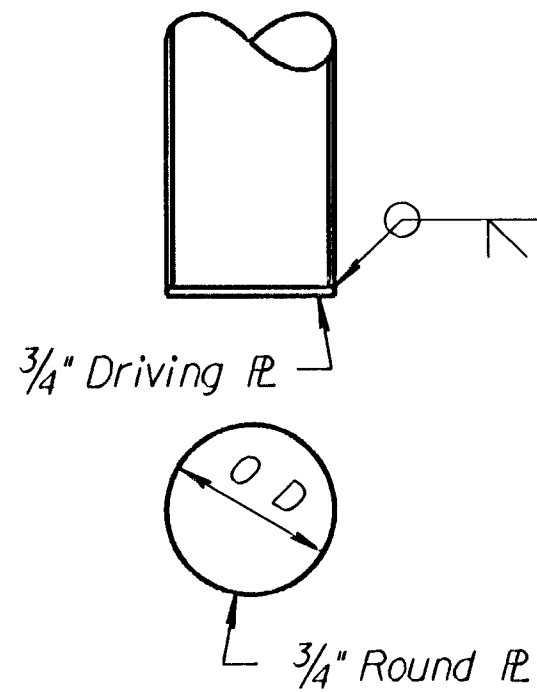
0 D	10 3/4"	T. = 0.25"
0 D	12 3/4"	T. = 0.25 Min.
0 D	14"	T. = 0.25 Min.

Note:
Pile shall be driven with a steel head having a projecting ring fitting inside the pipe. Clearance between ring and pipe should be 1/4".

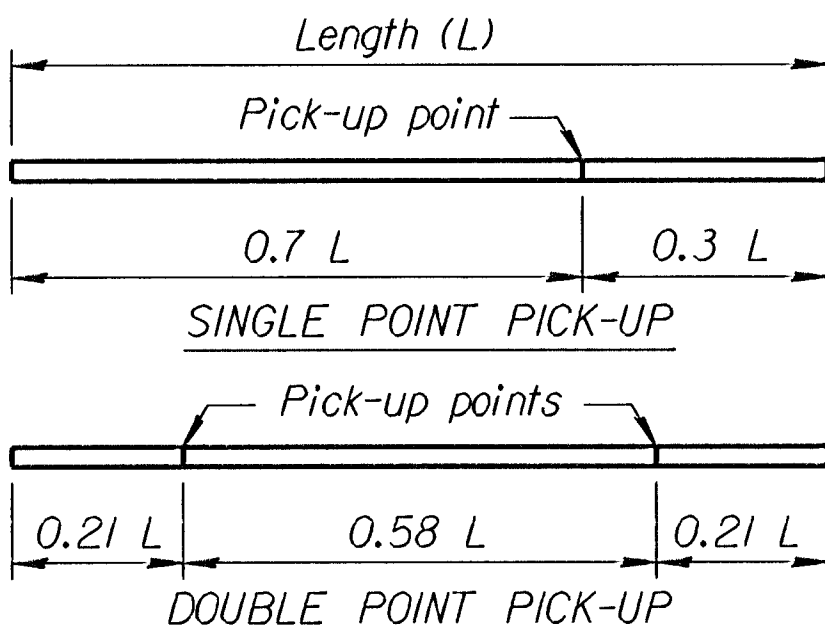


PIPE PILE
SPlice DETAIL

Note:
Pile pipe may be spiral welded, longitudinal welded, or seamless steel pipe.



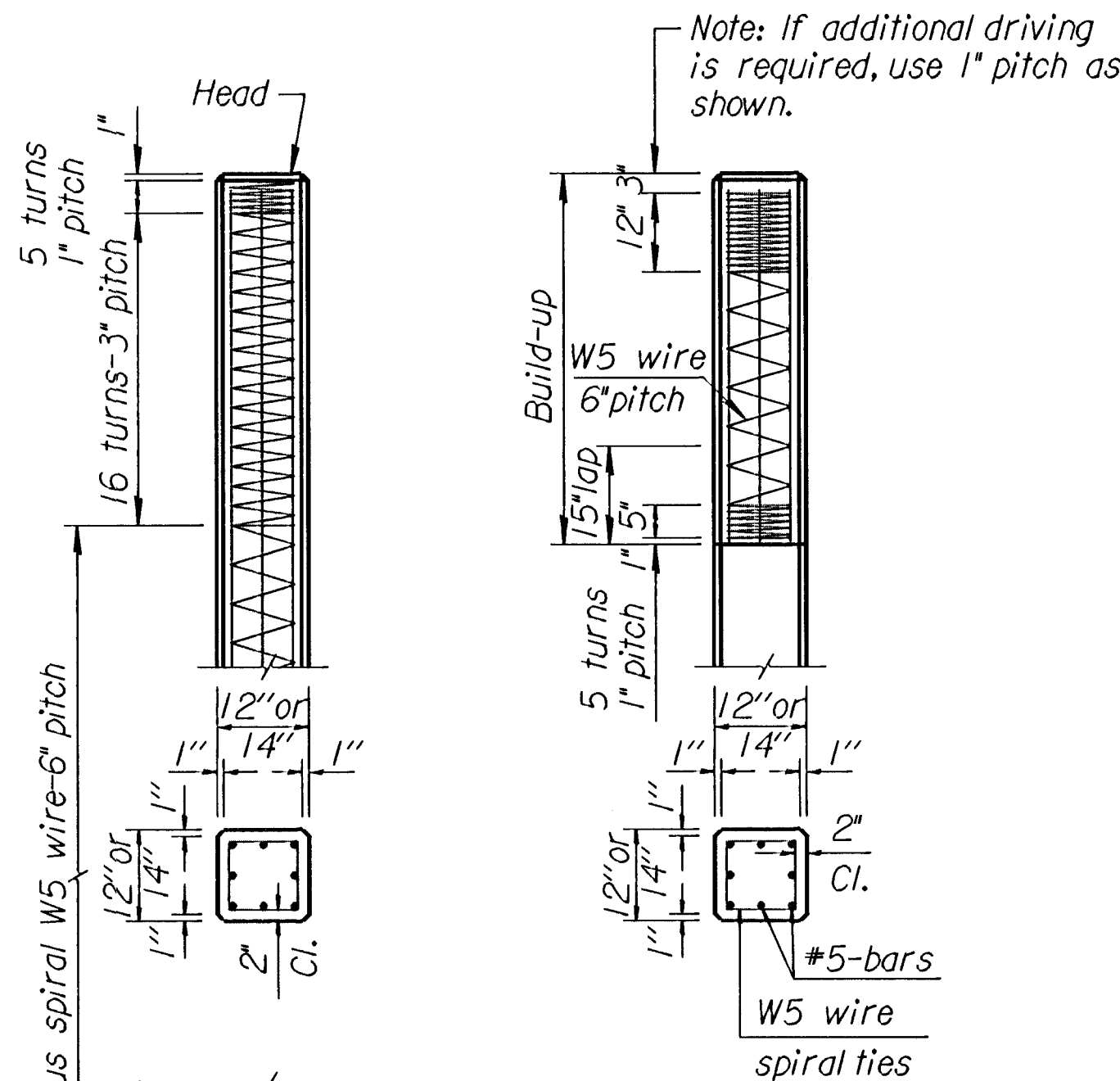
PLAIN ROUND
CAST-IN-PLACE CONCRETE PILES



PICK-UP POINTS FOR PRESTRESSED PILING

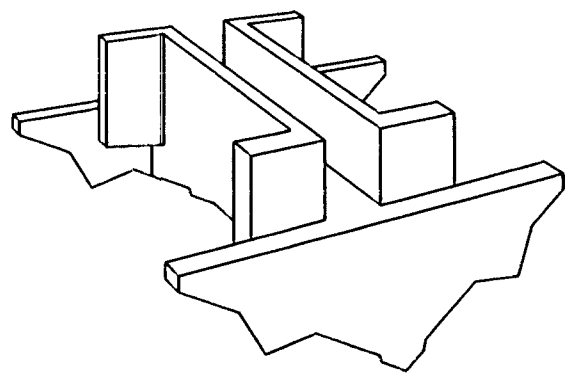
Max. length - 55' single point pick-up
Max. length - 80' double point pick-up

Note: Piles shall be marked at Pick-up points to indicate proper points for attaching handling lines.



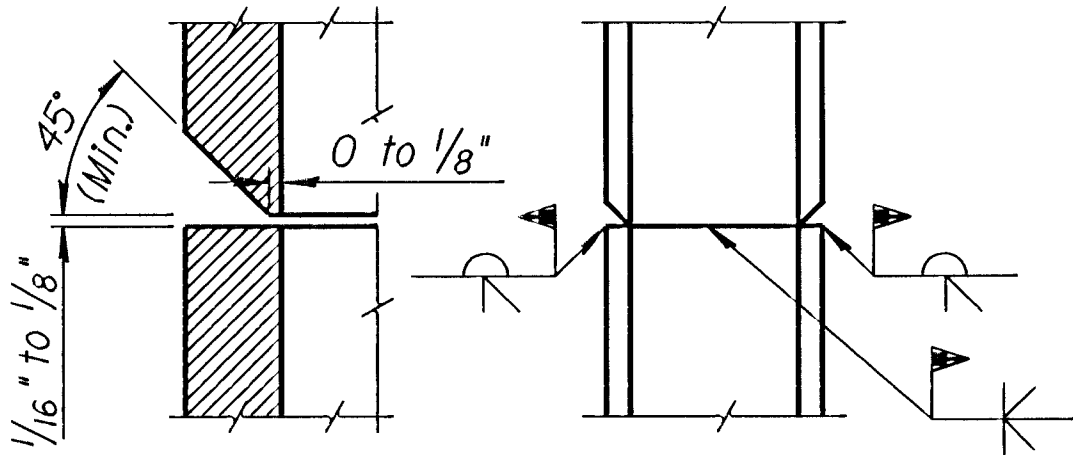
BUILD UP SECTION

12" OR 14"
PRESTRESSED
CONCRETE PILES



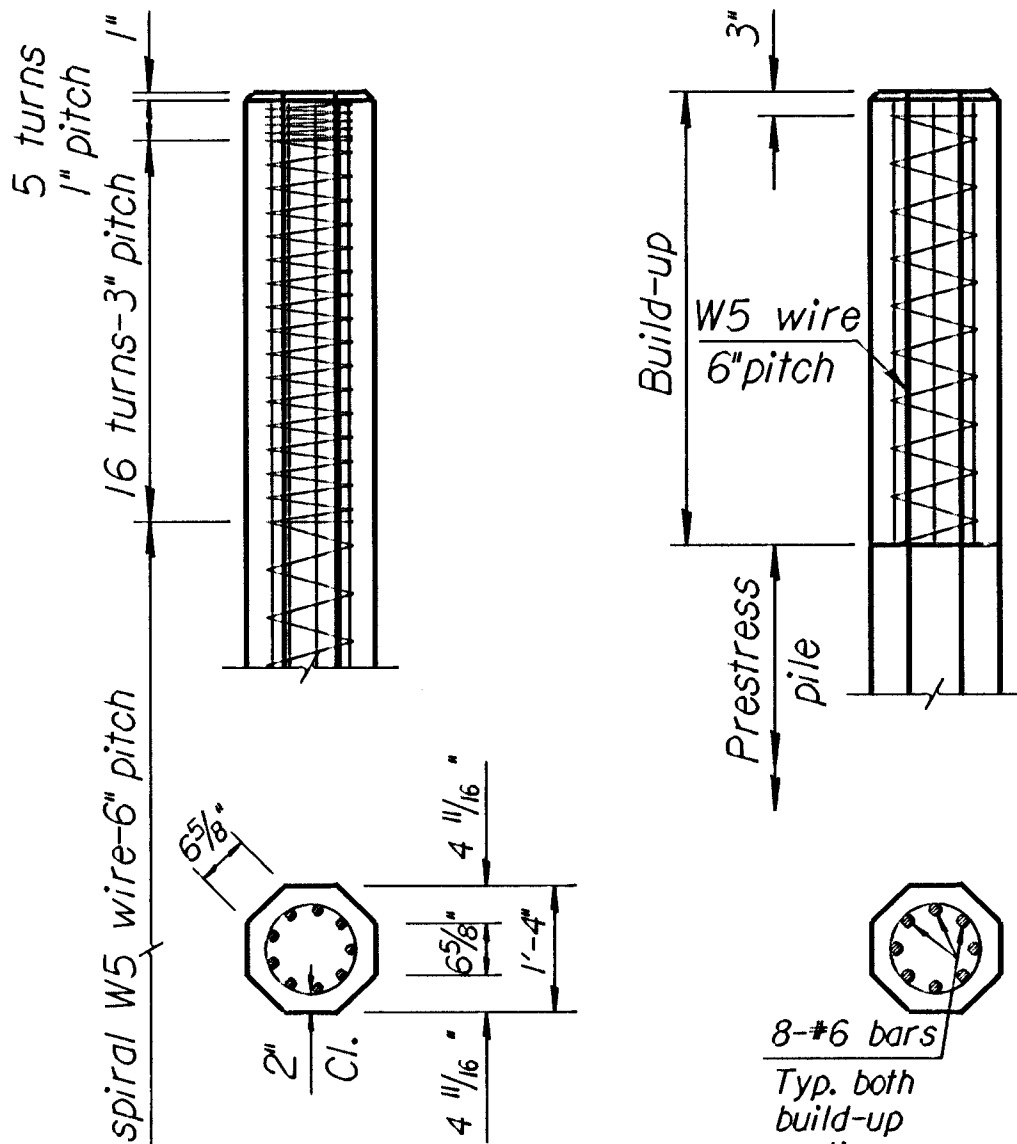
CAST STEEL PILE POINT

The pile point shall be a one-piece unit of cast steel. Weld pile points in accordance with manufacture's recommendations to each steel pile before driving.



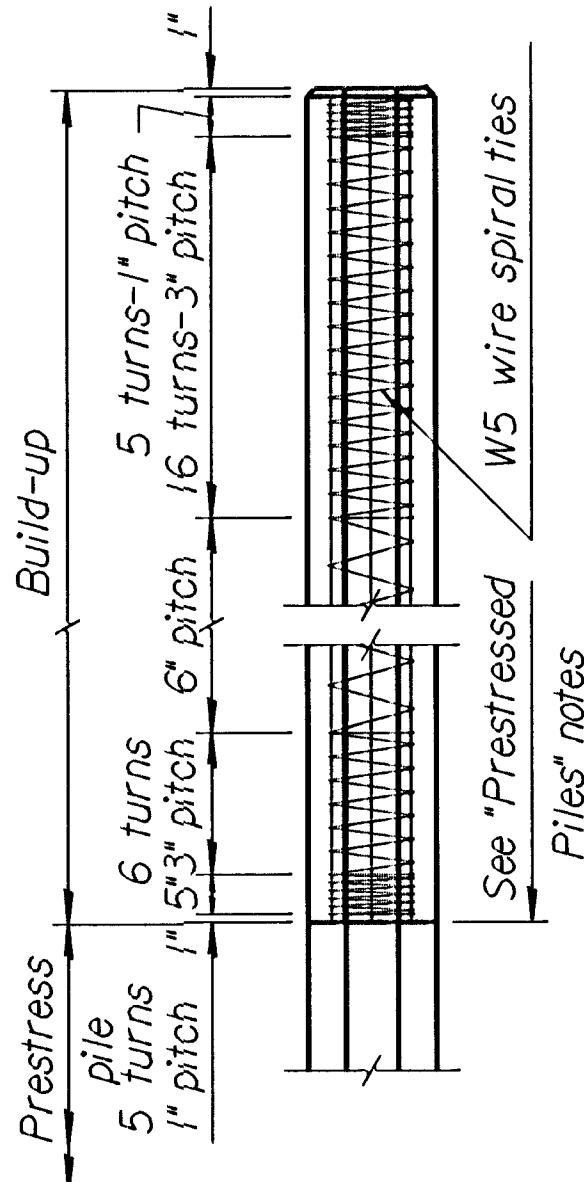
SECTION THRU FLANGE

PILE SPlice DETAIL
(H-PILE)



BUILD-UP
WITHOUT DRIVING

16" PRESTRESSED
CONCRETE PILES



BUILD-UP
WITH DRIVING

PRESTRESSED PILES

Method of attachment of pile to build-up may be by any of the methods" given in the notes on "Alternate Methods. If mild reinforcing steel is used for attachment, the area shall be no less than that used in the build-up.

ALTERNATE METHODS:

Method of attachment of a pile to build-up may be by any of the following methods:

1. Cut off at least 2'-0" of pile and expose a minimum of 2'-0" of strands.
2. Cast 8-#6 bars (equally spaced) into pile head. All bars shall extend into pile head and project from pile head a minimum of 2'-0".
3. Drill 8 holes in pile head (equally spaced) for installation of 8 grouted dowel bars of same size and length as in 2.
4. Provide cored holes for bars as in 3.

If a pile splice is required on pile bents, the joint shall be located at least 15' below finished ground line after driving.

No bars or strands are to extend from head of pile or build-up into footing or pile cap unless approved by the Engineer.

FOR INFORMATION ONLY EQUIVALENT POINT BEARING PILES

STEEL PILES	CONCRETE PILES	
	Pipe	Pre-stress
HPI0x42	10 3/4	
HPI2x53	12 3/4	
HPI4x73	14	12
HPI4x102		14
HPI4x117		16