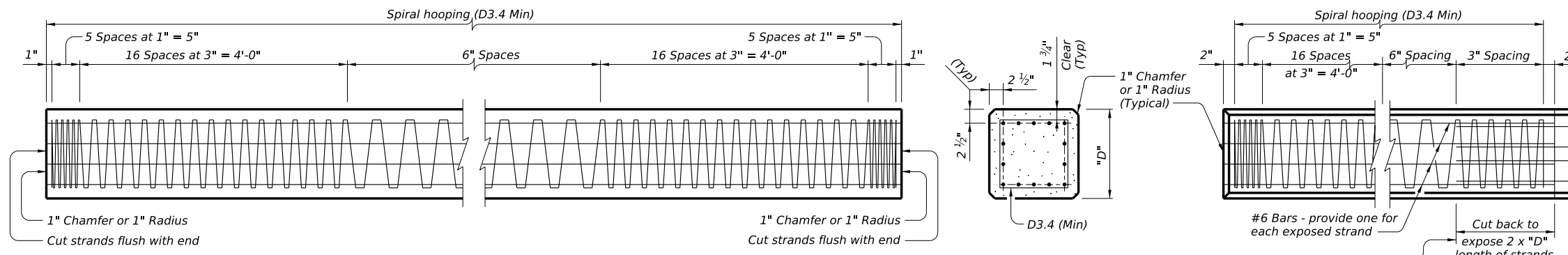


DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



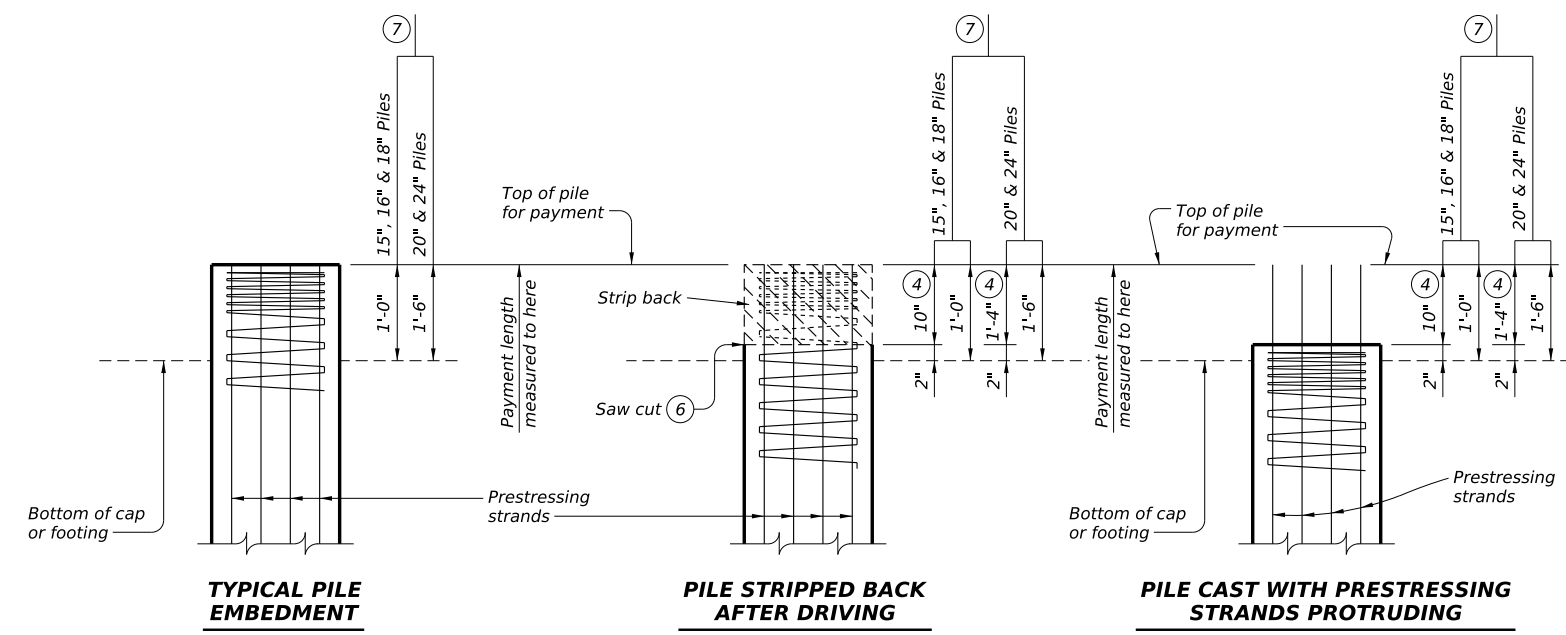
Pile Size "D"	Area of Pile Section in <sup>2</sup>	I in <sup>4</sup>	Weight Lb/Ft	Prestressing ⑤				Concrete Final Prestress (15% Loss) psi
				Size in	No.	Initial Prestress	Concrete Final Prestress (15% Loss) psi	
						each kips		
16"	254	5,340	265	1/2"	8	28.9	231	774
				0.6	8	29	232	776
18"	322	8,600	336	1/2"	10	28.9	289	763
				0.6	8	36	288	760
20"	398	13,150	415	1/2"	14	28.9	405	864
				0.6	12	34	408	871
24"	574	27,380	598	1/2"	18	28.9	520	770
				0.6	12	44	528	782

- ① Locate strands symmetrically about the axis of the pile, with no more than one strand difference between any two adjacent sides.
- ② Provide Class S concrete (f<sub>c</sub> = 4,000 psi) for pile build-ups.
- ③ Use typical pile embedment details unless shown otherwise elsewhere in the plans. Payment for piles will be in accordance with the details shown. Strip back piling and extend prestressing strands into substructure when piling conflicts with substructure reinforcing or when the side cover from pile edge to substructure edge is less than 4" after driving.
- ④ When stripped back piles are required, strip back piling after driving or cast short with strands protruding from top of piling as shown.
- ⑤ Provide 1/2" or 0.6" 270 ksi low relaxation strands tensioned to the forces shown in the table. If an optional design is used, provide a minimum concrete final prestress of 750 psi. Submit optional designs for approval.
- ⑥ Saw cut 1/2" deep around perimeter of pile at the breakback line.
- ⑦ Unless shown otherwise.
- ⑧ 3/4" deformed bar anchors (DBA), electric arc-welded to stinger anchor plate with complete fusion.
- ⑨ Place center of stinger within 1/2" of center of piling.

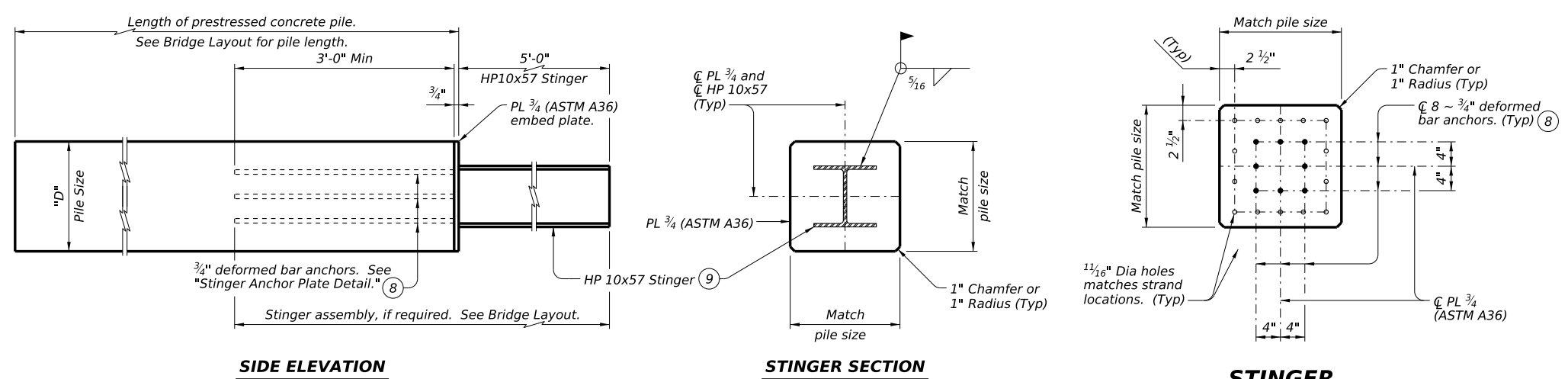
**FABRICATION NOTES:**  
 Provide Class H concrete. Provide sulfate resistant concrete when required.  
 Minimum release strength, f<sub>ci</sub> = 4,000 psi.  
 Minimum 28-day strength, f<sub>c</sub> = 5,000 psi.  
 All dimensions relating to prestressing steel are to centers of strands.  
 Provide Grade 60 reinforcing steel.  
 Provide deformed wire reinforcement meeting ASTM A1064.

**GENERAL NOTES:**  
 See Bridge Layout for size, number, and length of piling.  
 See Bridge Layout or elsewhere in the plans for stinger assembly requirements. Stinger assembly is subsidiary to the pile.  
 Shop drawing submittal and approval is not required if fabrication is in accordance with the details shown on this standard.  
 For treatment of damaged pile and the lifting loops, see the Concrete Repair Manual.

Cover dimensions are clear dimensions, unless noted otherwise.



**PILE EMBEDMENT DETAILS ③**



**TYPICAL PILE AND STINGER ASSEMBLY DETAILS**

Pile strands, reinforcing, and holes in stinger anchor plate not shown for clarity.

Showing stinger anchor plate for 20" pile, stinger anchor plates for other pile sizes are similar.

**Texas Department of Transportation** Bridge Division Standard

## PRESTRESSED CONCRETE PILING

### CP

FILE: MS-CP-24.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS				
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