

PROJECT SPECIFIC PILE NOTES

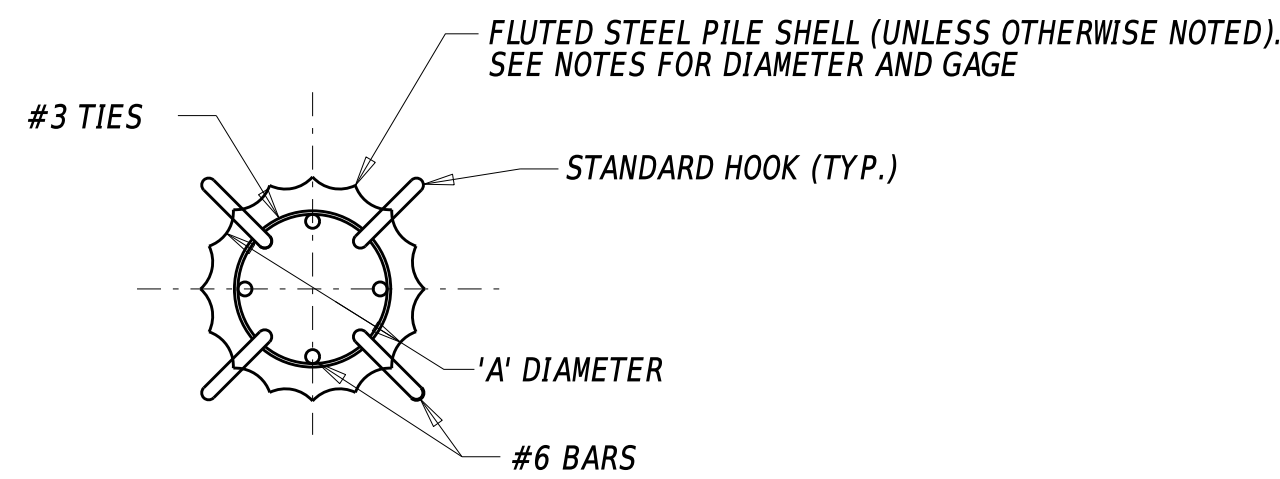
1. PILE TYPE:
THIS PROJECT WILL UTILIZE ___" DIA. CAST-IN-PLACE PILES, ___ GAGE. THE TAPERED END SECTION WILL BE A ___" TAPER (___" IN/FT), 8" POINT DIAMETER x ___" BUTT DIAMETER x ___' LENGTH. EXTEND THE REINFORCEMENT INTO THE PILE THE MINIMUM OF 20'-0" OR THE STRAIGHT PORTION OF THE PILE.
2. ESTIMATED PRODUCTION PILE LENGTH IS ___'.
3. REQUIRED TEST PILE LENGTH IS ___' LONGER THAN THE ESTIMATED PRODUCTION PILE LENGTH.
4. DRIVE PILES TO A BEARING RESISTANCE OF ___ KIPS USING A RESISTANCE FACTOR OF ___.
5. MINIMUM TIP ELEVATION WILL NOT BE REQUIRED FOR THIS PROJECT OR REFER TO THE PILE INSTALLATION DATA TABLE FOR MINIMUM TIP ELEVATION.

GENERAL PILE NOTES

1. FOR MORE INFORMATION REGARDING PILE DRIVING, INSTALLATION, MATERIALS, AND FABRICATION, REFER TO SECTION 605 - DRIVEN PILES OF THE STANDARD SPECIFICATIONS.
2. (A) DRIVE TEST PILES AT EACH LOCATION SHOWN ON THE PLANS. PRODUCTION PILES WILL BE ORDERED BASED ON THE RESULTS OF THE TEST PILE DRIVING.
or
(B) ORDER SAME LENGTH FOR ALL PILES (i.e. WITHOUT A LONGER TEST PILE). TEST PILES, AS NOTED, WILL BE DRIVEN FIRST TO ESTABLISH DRIVING CRITERIA FOR THE OTHER PILES IN EACH SUBSTRUCTURE ELEMENT. AN ADDITIONAL ___' HAS BEEN ADDED TO THE DESIGN LENGTH OF EACH PILE AS A CONTINGENCY.

CAST-IN-PLACE PILE NOTES

1. PROTECT ALL REINFORCING STEEL WITH FUSION BONDED EPOXY.
2. APPLY PROTECTIVE COATING TO ALL PILES IN ACCORDANCE WITH SECTION 1032.3.2 OF STANDARD SPECIFICATIONS.



TYPICAL PILE REINFORCEMENT PLAN

CAST-IN-PLACE PILE SIZES	
PILE SIZE 'A'	DOWELS AND HOOKS 'B'
12"	3 EA.
14"	4 EA.
16"	4 EA.
18"	4 EA.

SPECIAL NOTICE - DESIGNER NOTE

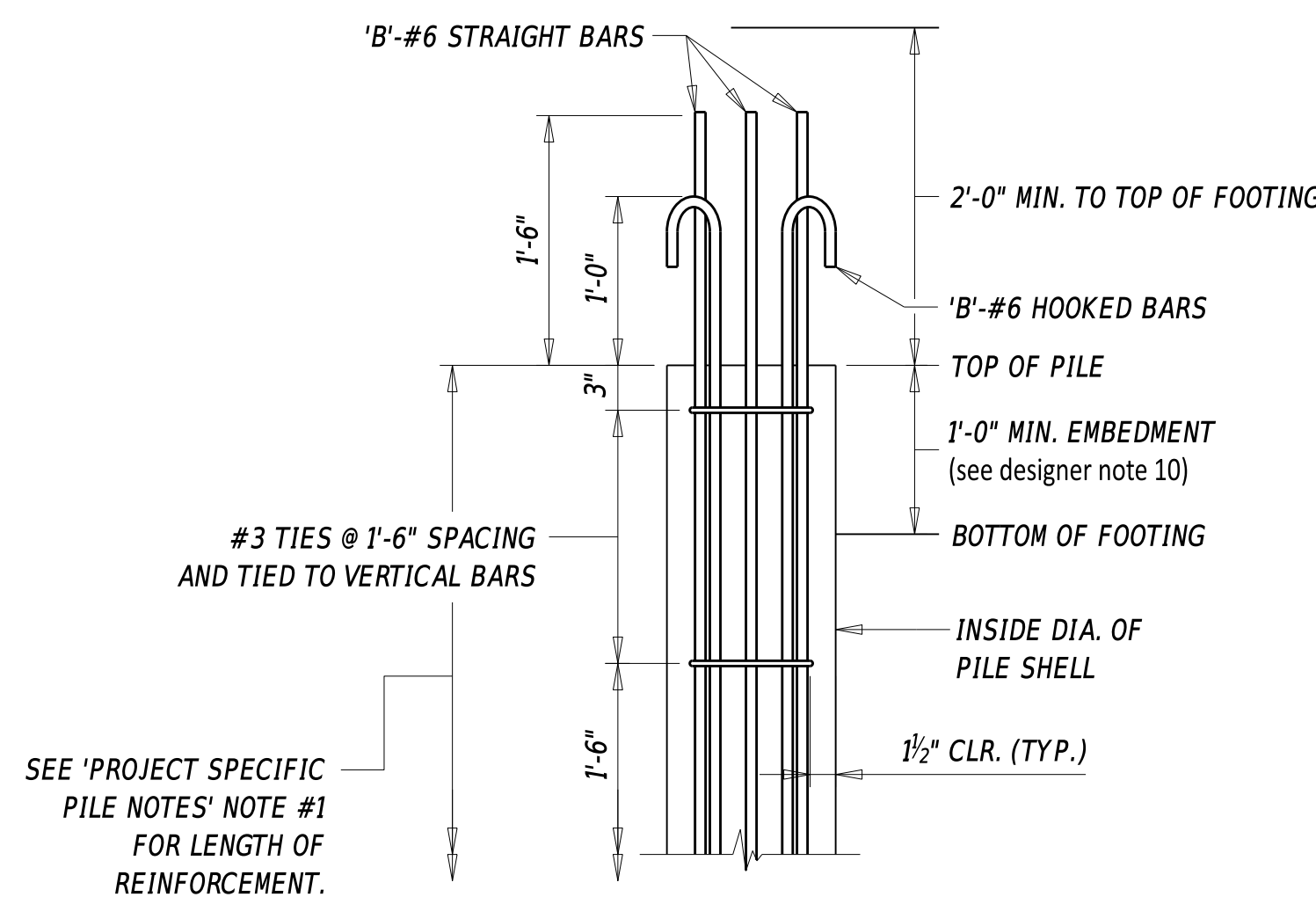
1. FLUTED CAST-IN-PLACE PILES HAVE BEEN UNAVAILABLE SINCE 2018. DO NOT SPECIFY THIS PARTICULAR PILE OPTION ON ANY NEW CONSTRUCTION. THESE DETAILS ARE RETAINED HERE FOR REFERENCE USE ON EXISTING BRIDGES.

DESIGNER NOTES

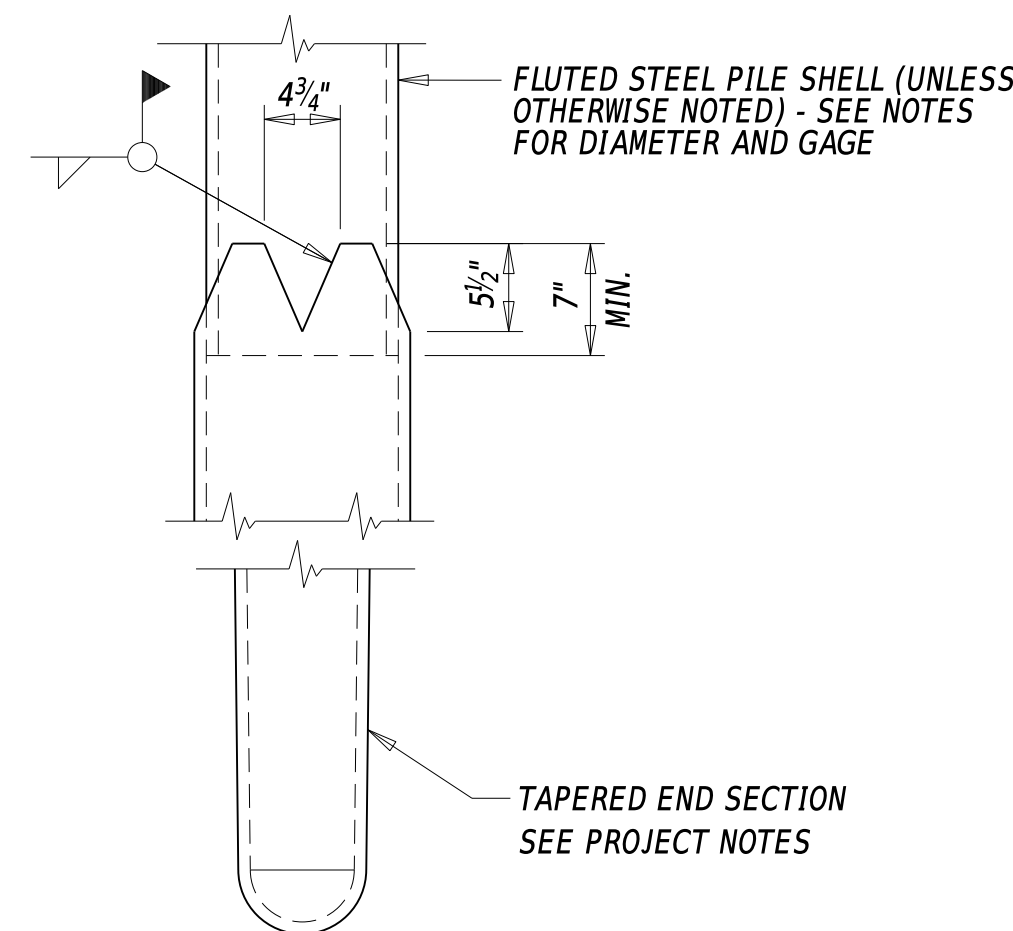
1. 'PROJECT SPECIFIC PILE NOTES', 'GENERAL PILE NOTES', AND 'CAST-IN-PLACE PILE NOTES' ARE REQUIRED TO BE SHOWN ON THE PLAN SETS.
2. UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 1, THE DESIGNER MUST DETERMINE THE APPROPRIATE GAGE THICKNESS FOR THE PILE BASED ON ANTICIPATED DRIVING STRESSES. IF THE ULTIMATE BEARING CAPACITY IS LESS THAN 400 KIPS, 7 GAGE IS USUALLY APPROPRIATE. IF THE ULTIMATE BEARING CAPACITY IS EXPECTED TO EXCEED 400 KIPS, A MINIMUM GAGE THICKNESS OF 5 SHOULD BE USED. THE MINIMUM GAGE THICKNESS OF 7 MUST BE USED IN ALL CASES. HOWEVER, IN SOME CASES DUE TO DRIVABILITY REASONS OR IN EXTREMELY CORROSIVE CONDITIONS, USE OF 3 GAGE MAY BE REQUIRED.
3. UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 1, THE DESIGNER MUST DETERMINE THE POINT OF FIXITY OF THE PILE AS PER A10.7.3.13.4 AND SECTION 107.5.4. IF THE DISTANCE FROM TOP OF THE PILE TO THE POINT OF FIXITY + 3'-0" IS LESS THAN 20'-0" (OR STRAIGHT PORTION OF THE PILE IF LESS THAN 20'-0"), THEN A MINIMUM OF 20'-0" (OR STRAIGHT PORTION OF THE PILE IF LESS THAN 20'-0") WILL BE REQUIRED. IF THE POINT OF FIXITY + 3'-0" IS GREATER THAN 20'-0", THEN NOTE 1 MUST BE REVISED ACCORDINGLY TO REFLECT THE ADDITIONAL LENGTH FOR REINFORCEMENT REQUIRED TO BE EXTENDED INTO THE PILE.
4. UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 2, THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED DESIGN PILE LENGTH IF 'GENERAL PILE NOTES', NOTE 2(A) IS USED. IF 'GENERAL PILE NOTES', NOTE 2(B) IS USED, THEN THE ESTIMATED PRODUCTION PILE LENGTH SHOULD BE EQUAL TO DESIGN PILE LENGTH + 5'-0".
5. UNDER 'PROJECT SPECIFIC PILE NOTES', NOTE 3, THE REQUIRED TEST PILE LENGTH SHOULD BE 10'-0" LONGER THAN THE ESTIMATED PRODUCTION PILE LENGTH IF 'GENERAL PILE NOTES', NOTE 2(A) IS USED. IF 'GENERAL PILE NOTES', NOTE 2(B) IS USED, THEN THE REQUIRED TEST PILE LENGTH SHOULD BE EQUAL TO THE ESTIMATED PRODUCTION PILE LENGTH + 5'-0".
6. UNDER 'GENERAL PILE NOTES', NOTE 2, THE DESIGNER MUST CHOOSE BETWEEN 2(A) AND 2(B) (AND DELETE THE NOTE CONTAINING THE METHOD NOT USED FOR THE PROJECT). METHOD 2(A) SHOULD BE USED IF THERE IS SUFFICIENT TIME FOR THE CONTRACTOR TO ORDER PRODUCTION PILES BASED ON TEST PILE RESULTS. THIS TYPICALLY APPLIES ONLY TO LARGER-SIZED PROJECTS OR WHEN PILE DRIVING IS NOT THE CRITICAL PATH. METHOD 2(B) IS MORE COMMON DUE TO TIME CONSTRAINTS IN THE CONSTRUCTION SCHEDULE AND THEREFORE IS USED FOR MAJORITY OF DELDOT PROJECTS.
7. UNDER 'CAST-IN-PLACE PILE NOTES', NOTE 2, THE DESIGNER MAY CONSIDER WAIVING REQUIREMENTS OF APPLYING COATING TO THE PILE IF EVIDENCE SUPPORTS THAT THE SOIL IS NON-CORROSIVE AND IS NOT LOCATED IN MARINE ENVIRONMENT. IF NO COATING IS REQUIRED, THIS NOTE MAY BE DELETED.
8. THE 'PILE INSTALLATION DATA' TABLE SHOULD BE USED FOR ALL PROJECTS. IF MINIMUM TIP ELEVATION IS NOT REQUIRED FOR THE PROJECT, THE DESIGNER SHOULD SIMPLY PLACE 'N/A' UNDER THE 'MINIMUM TIP ELEVATION' COLUMN. THE 'ACTUAL FIELD DATA' INFORMATION SHOULD BE FILLED OUT BY THE FIELD INSPECTOR AND INCLUDED IN THE AS-BUILT DRAWINGS.
9. THE DESIGNER MUST EVALUATE THE STRUCTURAL CAPACITY OF THE PILE FOR ANTICIPATED DRIVING CONDITIONS AND WHEN STRENGTH I LOADS ARE APPLIED TO THE PILES AS PART OF PILE SIZING SELECTION.
10. THE DESIGNER MUST DETERMINE WHETHER THE PILE BE CLASSIFIED AS 'FREE HEAD' OR 'FIXED HEAD'.

(a) STANDARD DELDOT PRACTICE REQUIRES THE TOP OF PILE TO PROJECT A MINIMUM OF 12" INTO THE PILE CAP AFTER ALL DAMAGED MATERIAL HAS BEEN REMOVED WHILE MEETING REQUIRED QUANTITY OF DOWELS AND HOOKS 'B' IN THE TABLE PROVIDED ON THIS SHEET. PILES MEETING THESE MINIMUM REQUIREMENTS WILL BE CONSIDERED AS 'FREE HEAD'.

(b) FOR A PILE TO BE CLASSIFIED AS 'FIXED HEAD', THE PILE MUST MEET ALL THE REQUIREMENTS AS SPECIFIED IN 10(a) WITH EXCEPTION THAT TOP OF PILE MUST PROJECT INTO THE PILE CAP A MINIMUM OF 2*PILE DIA. AFTER ALL DAMAGED MATERIAL HAVE BEEN REMOVED.
11. REFER TO SECTION 107.3.4.3 FOR MORE INFORMATION ON CAST-IN-PLACE PILES.
12. FOR PILE BENTS, THE DESIGNER MUST DETERMINE THE POINT OF FIXITY AS PER A10.7.3.13 AND SECTION 107.5.4. FURTHERMORE, THE DESIGNER MUST CONSIDER THE SLENDERNESS RATIO WHEN SELECTING THE PILE SIZE FOR BOTH PRODUCTION AND TEST PILES.
13. SINCE FLUTED STEEL PILES ARE PROPRIETARY, THE DESIGNER MUST INCLUDE ALTERNATIVE PILE TYPE ON THE PLANS OR THE CONTRACT DOCUMENT.



TYPICAL PILE REINFORCEMENT ELEVATION



NOTE: THIS SPLICE DETAIL SHALL ALSO BE USED FOR FIELD SPLICES OF BUILD-UP SECTIONS.

TYPICAL PILE SPLICE

CAST-IN-PLACE PILE DETAILS

SUBSTRUCTURE UNIT	PILE INSTALLATION DATA				
	DESIGN DATA		ACTUAL FIELD DATA		
	MINIMUM TIP ELEVATION	ESTIMATED PILE TIP ELEVATION	ACTUAL MINIMUM TIP ELEVATION	ACTUAL AVERAGE TIP ELEVATION	ACTUAL MAXIMUM TIP ELEVATION

