



CASING PIPE DIA. "d" (IN.)	"H" (FT.)	THICKNESS "A" (IN.)	PIER WIDTH "B"	FOOTING LENGTH "C"	FOOTING WIDTH "D"
6-12	≤6	12	2'-4"	5'-6"	3'-0"
	8	12		6'-3"	
	10	12		6'-8"	
	12	12		7'-2"	
14-20	≤6	12	3'-0"	8'-0"	3'-0"
	8	12		9'-0"	
	10	12		9'-10"	
	12	14		10'-6"	
22-28	≤6	14	3'-8"	8'-9"	4'-0"
	8	14		10'-0"	
	10	14		11'-0"	
	12	14		11'-10"	
30-36	≤6	18	4'-4"	9'-0"	4'-0"
	8	18		10'-6"	
	10	18		11'-6"	
	12	18		12'-4"	
38-48	≤6	18	5'-4"	9'-6"	5'-0"
	8	18		11'-0"	
	10	18		12'-0"	
	12	18		12'-10"	
51-56	≤6	18	6'-4"	9'-10"	5'-0"
	8	18		11'-4"	
	10	18		12'-4"	
	12	18		13'-2"	

NOTES:

- SHALLOW FOUNDATION DESIGN SHOWN THIS DETAIL IS BASED ON THE FOLLOWING PARAMETERS:
 - ALLOWABLE SOIL BEARING CAPACITY = 2,000 PSF
 - CONCRETE COMPRESSIVE STRENGTH = 4,000 PSI
 - GRADE 60 REINFORCING STEEL
 - MAX. STREAM VELOCITY = 10 FT/SEC
 - MAX. SUPPORT HEIGHT (H) = 12'-0"
 IF FIELD CONDITIONS REQUIRE ANY DEVIATION FROM THESE PARAMETERS, THE FOUNDATION DESIGN SHALL BE REVIEWED BY THE ENGINEER.
- IF SUBGRADE AT LOCATION OF SUPPORTS IS DEEMED UNABLE TO WITHSTAND 2,000 PSF BEARING PRESSURE, A PILE SUPPORTED FOUNDATION SHALL BE UTILIZED AS PER DETAIL S-15.
- IF BEDROCK IS ENCOUNTERED WHICH WILL PREVENT 3- FEET MIN. COVER OVER FOOTING, DOWELS SHALL BE DRILLED INTO BEDROCK PRIOR TO PLACING FOUNDATION, SEE DETAIL S-17.
- TWELVE-INCH AND FOURTEEN-INCH THICK PIERS AND FOOTINGS SHALL BE REINFORCED WITH #5 BARS AT 12 INCHES O.C. IN EACH DIRECTION ON EACH FACE. EIGHTEEN-INCH WIDE PIERS AND FOOTINGS SHALL BE REINFORCED WITH #7 BARS AT 12 INCHES O.C. IN EACH DIRECTION ON EACH FACE.
- EIGHTEEN-INCH THICK PIERS SHALL REQUIRE TWO STRAPS OVER THE PIPE INSTEAD OF ONE (AS SHOWN).
- WHEN CONCRETE SUPPORTS ARE REQUIRED TO BE LOCATED WITHIN A STREAM AND ARE NOT COVERED WITH BLACKFILL, SEE DETAIL S-19 FOR MODIFICATIONS TO UPSTREAM FACE SUPPORT.

**CITY OF RALEIGH
STANDARD DETAIL**

REVISIONS	DATE: 01/18/2025	NOT TO SCALE
AERIAL PIPE CROSSING CONCRETE PIER DETAIL		
S-14		