



CASING PIPE DIA. "d" (IN.)	PIER THICKNESS "A" (IN.)	FOOTING THICKNESS "B" (IN.)	PIER WIDTH "C"	FOOTING WIDTH "D"	FOOTING LENGTH "E"	PILE SPACING "F"
6-12	12	20	2'-4"	3'-0"	6'-0"	3'-0"
14-20	12	20	3'-0"	3'-0"	8'-0"	5'-0"
22-28	18	26	3'-8"	4'-0"	8'-9"	5'-9"
30-36	18	26	4'-4"	4'-0"	9'-0"	6'-0"
38-48	18	26	5'-4"	5'-0"	9'-6"	6'-6"
51-60	18	26	6'-4"	5'-0"	9'-10"	6'-10"

NOTES:

1. PILE SUPPORTED PIER FOUNDATION DESIGN SHOWN ON THIS DETAIL IS BASED ON THE FOLLOWING PARAMETERS:

- A. MINIMUM CAPACITY OF HP12x53 PILE = 30 TONS
- B. CONCRETE COMPRESSIVE STRENGTH = 4,000 PSI
- C. GRADE 60 REINFORCING STEEL
- D. MAXIMUM STREAM VELOCITY = 10 FT/SEC

IF FIELD CONDITIONS REQUIRE ANY DEVIATION FROM THESE PARAMETERS, THE FOUNDATION DESIGN SHALL BE REVIEWED BY THE ENGINEER.

- 2. LENGTH OF PILES SHALL BE AS REQUIRED TO DEVELOP 30 TON CAPACITY BY EITHER END BEARING, FRICTION OR A COMBINATION OF END BEARING AND FRICTION. AS A MINIMUM, PILES SHALL BE DRIVEN AT LEAST 15 FEET INTO UNDISTURBED SOIL.
- 3. TWELVE-INCH AND FOURTEEN-INCH WIDE PIERS SHALL BE REINFORCED WITH #5 BARS AT 12 INCHES O.C. IN EACH DIRECTION ON EACH FACE. EIGHTEEN-INCH WIDE PIERS SHALL BE REINFORCED WITH #7 BARS AT 12 INCHES O.C. IN EACH DIRECTION ON EACH FACE. FOOTINGS SHALL BE REINFORCED TYPICALLY TO PIERS.
- 4. EIGHTEEN-INCH WIDE PIERS SHALL REQUIRE TWO STRAPS OVER THE PIPE INSTEAD OF ONE (AS SHOWN).
- 5. WHEN CONCRETE SUPPORTS ARE REQUIRED TO BE LOCATED WITHIN A STREAM AND ARE NOT COVERED WITH BACKFILL, SEE DETAIL S-19 FOR MODIFICATIONS TO UPSTREAM FACE OF SUPPORT.

CITY OF RALEIGH		
STANDARD DETAIL		
<i>REVISIONS</i>	<i>DATE: 01/18/2025</i>	<i>NOT TO SCALE</i>
	AERIAL PIPE CROSSING PILE SUPPORTED PIER DETAIL	
S-16		