PROJECT REFERENCE NO.	SHEET NO.
U-4010	SIG. 3I

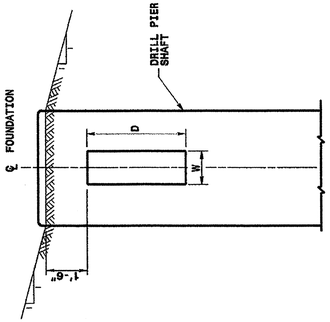
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

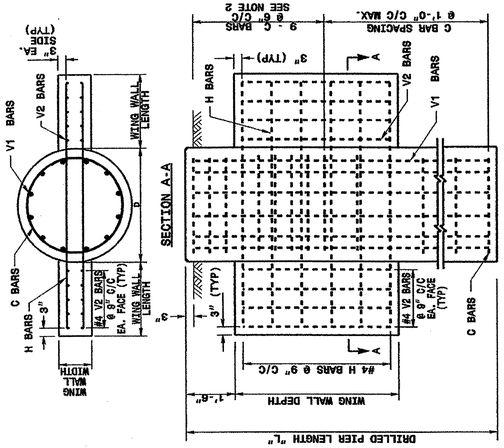
ENGLISH STANDARD DRAWING FOR METAL POLE FOUNDATIONS REINFORCING CAGE DETAILS

SHEET 1 OF 2 — 1742.01

NOTES

1. THE NUMBER OF C-BARS IS BASED ON FOUNDATION DEPTH. SEE FOUNDATION SELECTION TABLES.
2. CIRCULAR TIE REINFORCING RINGS MAY BE VERTICALLY ADJUSTED BY +/- 3" AT A DEPTH BETWEEN 2'-0" AND 3'-0" TO FACILITATE THE INSTALLATION OF ELECTRICAL CONDUIT ENTERING IN THE CAGE.
3. THE LENGTH OF V1-BARS IS BASED ON FOUNDATION DEPTH. SEE FOUNDATION SELECTION TABLES.
4. THE QUANTITIES FOR STEEL AND CONCRETE SHOWN IN THE WING WALL DETAILS CHART REFLECT THE AMOUNT OF MATERIAL FOR 1 PAIR OF WING WALLS (2 WING WALLS PER DRILL PIER SHAFT.)
5. CONCRETE DRILL PIER SHAFT VOLUME (CU. YDS.):
   FOR 42" DIA.= .356xL
   FOR 48" DIA.= .485xL
6. DEFORM REINFORCING STEEL TO CONFORM TO ASTM A615 GRADE 60. TIES MAY BE DEFORMED OR PLAIN.
7. CAST CONCRETE AGAINST UNDISTURBED SOIL.
8. DO NOT ERECT TRAFFIC SIGNAL STRUCTURES BEFORE THE CONCRETE IN THE FOUNDATION HAS ATTAINED A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
9. MAKE PROVISIONS FOR DRAINAGE OF WATER FROM INSIDE OF THE METAL SUPPORT.
10. FOR OTHER DETAILS REGARDING CONSTRUCTION OF CONCRETE FOUNDATION SEE PROJECT SPECIAL PROVISIONS.
11. IN CASE OF ANY CROSS SLOPES, GRADE AROUND THE FOUNDATION AS FOLLOWS:





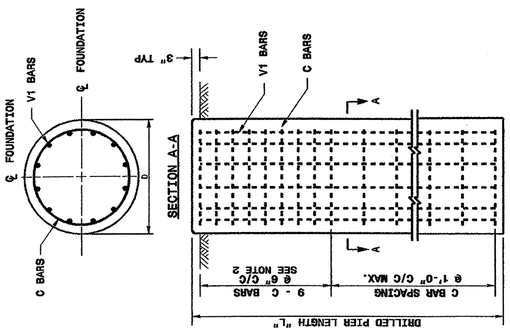
REINFORCING STEEL TABLE FOR STANDARD 42" and 48" DRILL PIER SHAFT WITH TYPE 1 AND TYPE 2 WING WALLS

Wing Wall Type	Drill Pier Shaft Dia. (in)	Bar Mark	No.	Size	Type	Length
TYPE 1	42"	V1	9	#8	STR.	**
		V2	12	#4	STR.	2'-6"
		H	8	#4	STR.	8'-0"
		C	*	#4	CIR.	10'-9"
TYPE 2	42"	V1	9	#8	STR.	**
		V2	16	#4	STR.	4'-6"
		H	12	#4	STR.	9'-0"
		C	*	#4	CIR.	10'-9"
TYPE 2	48"	V1	12	#8	STR.	**
		V2	16	#4	STR.	4'-6"
		H	12	#4	STR.	9'-0"
		C	*	#4	CIR.	12'-6"

* See Construction Note No. 1.
** See Construction Note No. 2.
See Construction Note No. 3.

WING WALL DETAILS

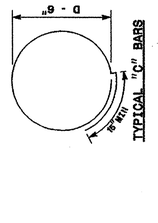
Wing Wall Type	Wing Wall Length (ft.)	Wing Wall Width (ft.)	Wing Wall Depth (ft.)	Concrete Volume (Cu. Yds.)
TYPE 1	1'-6"	1'-0"	8'-0"	.4
TYPE 2	3'-0"	1'-0"	8'-0"	1.2



REINFORCING STEEL TABLE FOR STANDARD DRILL PIER SHAFT (42" & 48" DIAMETER)

SHAFT DIA. (in)	VOLUME OF CONC. (cu. yds)	BAR MARK	No.	Size	Type	Length
42"	.356 x L	V1	9	#8	STR.	**
		C	*	#4	CIR.	10'-9"
48"	.485 x L	V1	12	#8	STR.	**
		C	*	#4	CIR.	12'-6"

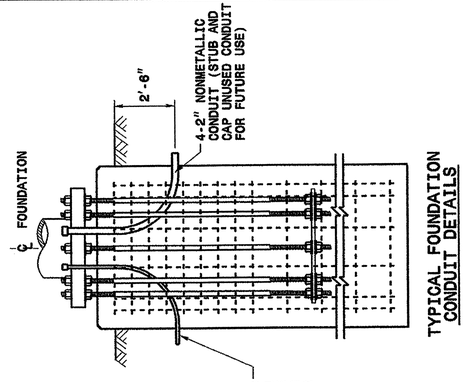
* See Construction Note No.1.
** See Construction Note No. 2.



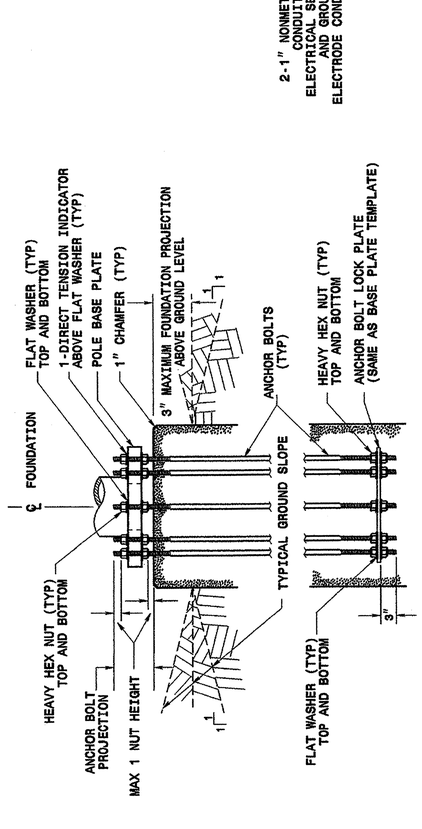
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR METAL POLE FOUNDATIONS INSTALLATION DETAILS

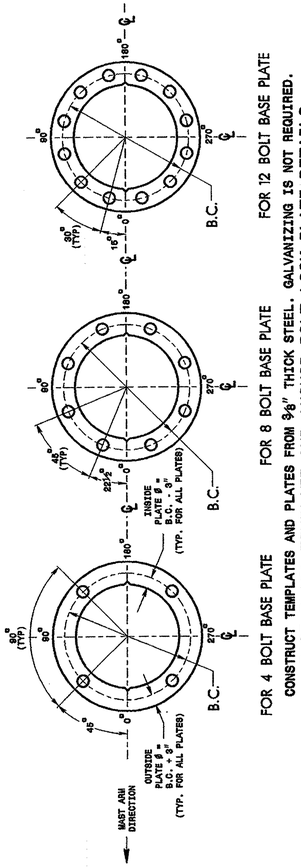
SHEET 2 OF 2 — 1742.01



TYPICAL FOUNDATION CONDUIT DETAILS



TYPICAL FOUNDATION ANCHOR BOLT DETAILS
REINFORCING CAGE NOT SHOWN FOR CLARITY



FOR 12 BOLT BASE PLATE
FOR 8 BOLT BASE PLATE
FOR 4 BOLT BASE PLATE
CONSTRUCT TEMPLATES AND PLATES FROM 3/8" THICK STEEL. GALVANIZING IS NOT REQUIRED.

BASE PLATE TEMPLATE AND ANCHOR BOLT LOCK PLATE DETAILS

Structural Engineer	Electrical Engineer
NORTH CAROLINA PROFESSIONAL SEAL 028094 ENGINEER DEBESH C. SARKAR	NORTH CAROLINA PROFESSIONAL SEAL 16286 ENGINEER MILTON J. DEAN
D. SarKar 9.12.03	Milton J. Dean 9/18/03
SIGNATURE DATE	SIGNATURE DATE

Standard Drawings
Traffic Management and Signal Systems Unit
122 N. McDowell St., Raleigh, NC 27603

See Plate for Title

Original: 2002 Standards

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