PROJECT REFERENCE NO.	SHEET NO.
B-3681	Sig. 7

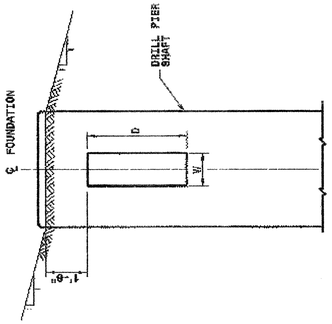
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

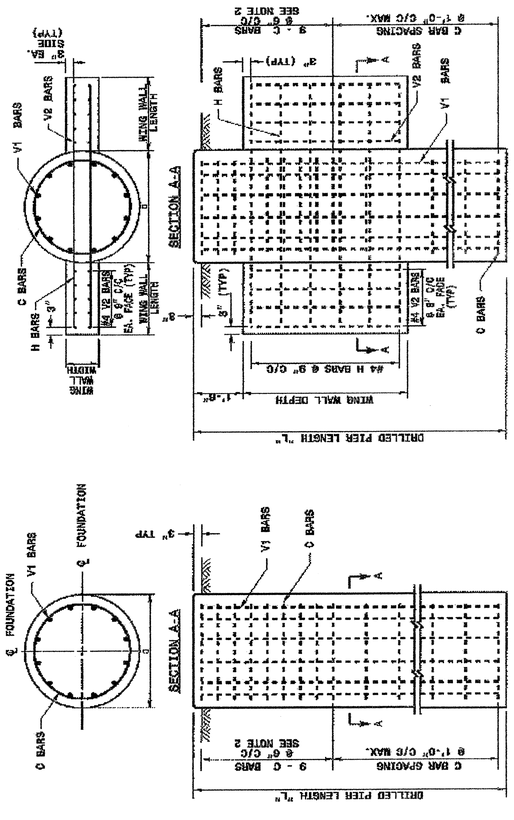
ENGLISH STANDARD DRAWING FOR
METAL POLE FOUNDATIONS
REINFORCING CAGE DETAILS

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 ± 3" IN DEPTH BETWEEN V1-BARS AT 3" 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 REFLECTS 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.= .856xL
   FOR 48" DIA.= .465xL
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.)	Reinforcing Steel Bar Mark	No.	Size	Type	Length
TYPE 1	42"	V1	8	#6	STR.	25'-8"
		V2	12	#4	STR.	21'-8"
		H	6	#4	STR.	6'-9"
		C	*	#4	COR.	10'-9"
TYPE 2	42"	V1	8	#8	STR.	**
		V2	16	#4	STR.	41'-8"
		H	12	#4	STR.	9'-0"
		C	*	#4	COR.	10'-9"
TYPE 8	42"	V1	12	#8	STR.	**
		V2	16	#4	STR.	41'-8"
		H	12	#4	STR.	9'-0"
		C	*	#4	COR.	12'-9"

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

WING WALL DETAILS

Wing Wall Type	Wing Wall Length (ft.)	Wing Wall Width (ft.)	Wing Wall Depth (ft.)	Concrete Volume (cu. Yds.)
TYPE 1	7'-6"	1'-0"	8'-0"	4
TYPE 2	8'-0"	1'-0"	8'-0"	4.2

See Construction Note No. 3.

Drilled Pier Shaft Dia. (in.)	Concrete Volume (cu. yds.)	Bar Mark	No.	Size	Type	Length
42"	.856 x L	V1	9	#6	STR.	**
		C	*	#4	COR.	10'-9"
48"	.465 x L	V1	12	#8	STR.	**
		C	*	#4	COR.	12'-9"

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

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REINFORCING CAGE DETAILS

SHEET 1 OF 2
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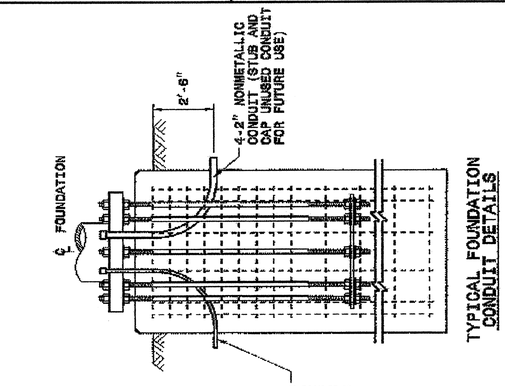
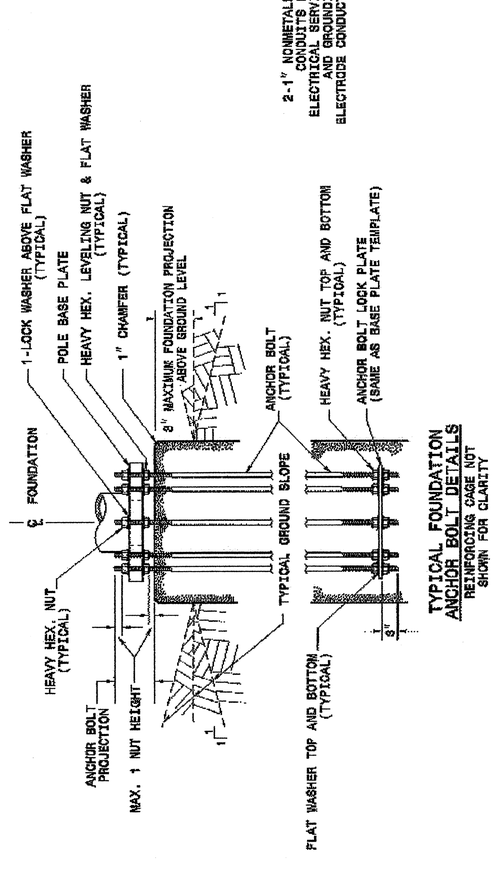
ENGLISH STANDARD DRAWING FOR
METAL POLE FOUNDATIONS
INSTALLATION DETAILS

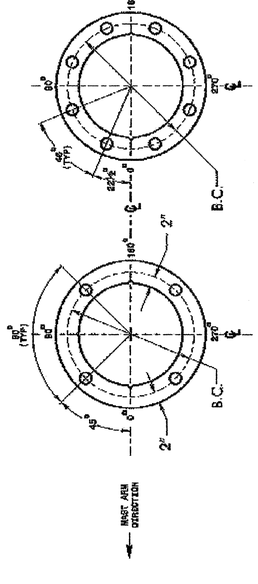
SHEET 2 OF 2
1742.01



TYPICAL FOUNDATION CONDUIT DETAILS



TYPICAL FOUNDATION ANCHOR BOLT DETAILS
REINFORCING CAGE NOT SHOWN FOR CLARITY



CONSTRUCT TEMPLATES AND PLATES FROM ¼" THICK STEEL. GALVANIZING IS NOT REQUIRED.
BASE PLATE TEMPLATE AND ANCHOR BOLT LOCK PLATE DETAILS

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ENGLISH STANDARD DRAWING FOR
METAL POLE FOUNDATIONS
INSTALLATION DETAILS

SHEET 2 OF 2
1742.01

Structural Engineer	Electrical Engineer
NORTH CAROLINA PROFESSIONAL SEAL 026094 ENGINEER DEBESH C. SARKAR	NORTH CAROLINA PROFESSIONAL SEAL 023919 ENGINEER GREGORY A. FULLER
D. Sarkar 8/20/04 SIGNATURE DATE	Gregory A. Fuller 8/25/04 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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Bentley