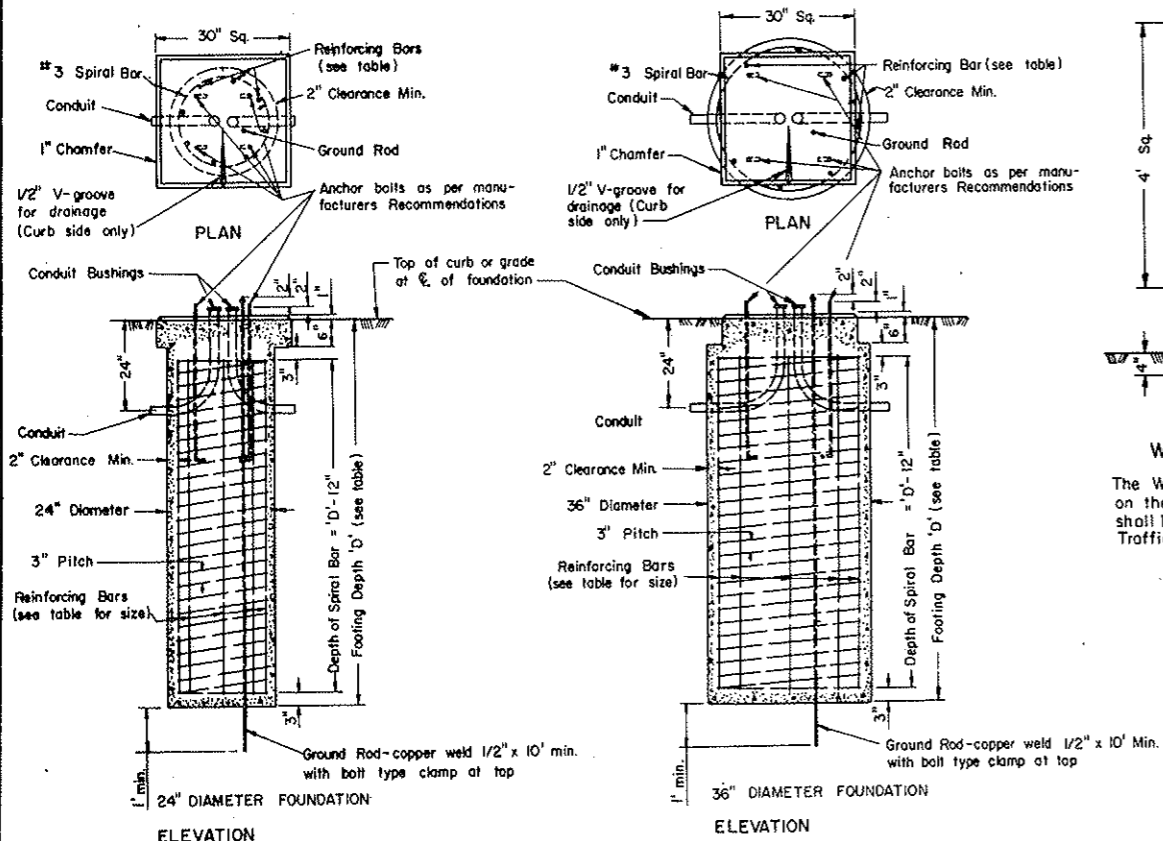


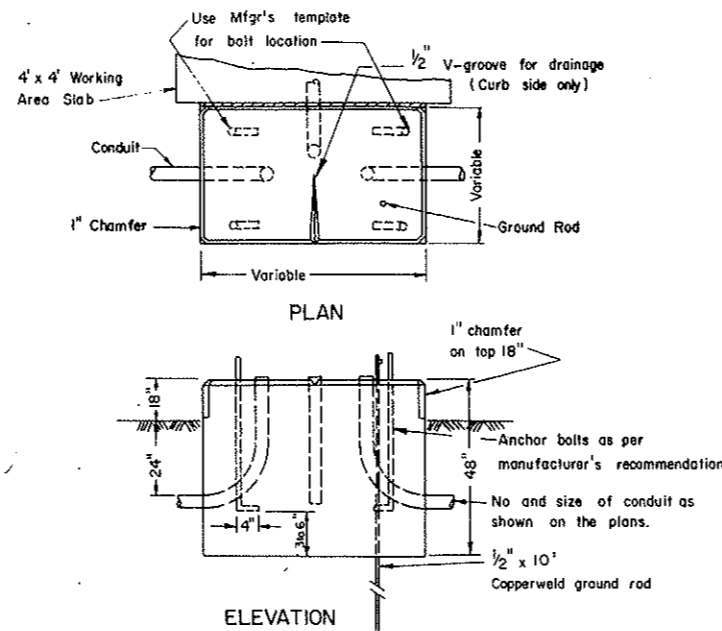
LIGHT & SIGNAL STANDARD FOUNDATION SELECTION TABLE				
Description	Reinforcing Bars Required	Footing Depth "D" 24" Diameter	Reinforcing Bars Required	Footing Depth "D" 36" Diameter
Combination 50' Mounting Height, 26'-44" Signal Mast Arm	8-#8	12'	8-#7	10'
Combination 50' Mounting Height, 0-25' Signal Mast Arm	8-#6	10'	8-#5	9'
Light Standard 50' Mounting Height	8-#5	8'	8-#4	7'
Combination 40' Mounting Height, 26'-44" Signal Mast Arm	8-#7	11'	8-#6	9'
Combination 40' Mounting Height, 0-25' Signal Mast Arm	8-#6	10'	8-#5	8'
Light Standard 40' Mounting Height	8-#5	6'	8-#4	5'
Combination 30' Mounting Height, 26'-44" Signal Mast Arm	8-#6	10'	8-#5	6'
Combination 30' Mounting Height, 0-25' Signal Mast Arm	8-#6	10'	8-#5	8'
Light Standard 30' Mounting Height	8-#5	6'	8-#4	5'
Type IV Signal Standard	8-#5	8'	8-#4	7'
Type I, II & III Signal Standard	*	4'	*	3'

* No reinforcement is required if the anchor bolts extend to within 3" to 6" above the bottom of the foundation. The loads described in the above table are maximum for each foundation shown. All reinforcing steel to be Grade 40 or 60. If the Contractor elects to use a 24" square foundation, the next size smaller reinforcement bars may be substituted for those shown in the table. No substitutions may be made for a 36" square foundation. #4 tie bars on 12" c-c may be substituted for the spiral when a 24" square foundation is used. #4 round tie bars on 12" c-c may be substituted for the spiral when a 24" or 36" round foundation is used. Round tie bars shall have a min. of 12" lap.

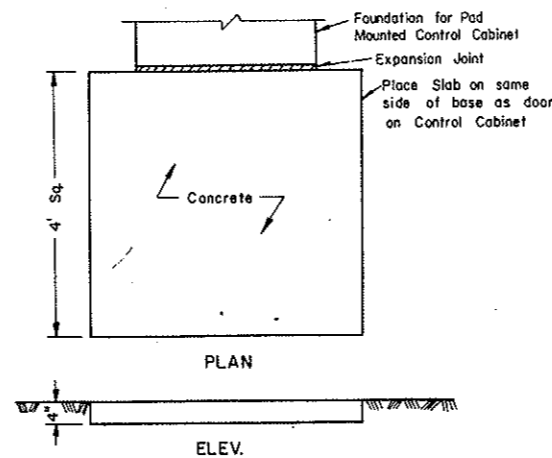


LIGHT & SIGNAL STANDARD FOUNDATION

CONCRETE FOUNDATIONS (TRAFFIC SIGNALS & HIGHWAY LIGHTING)

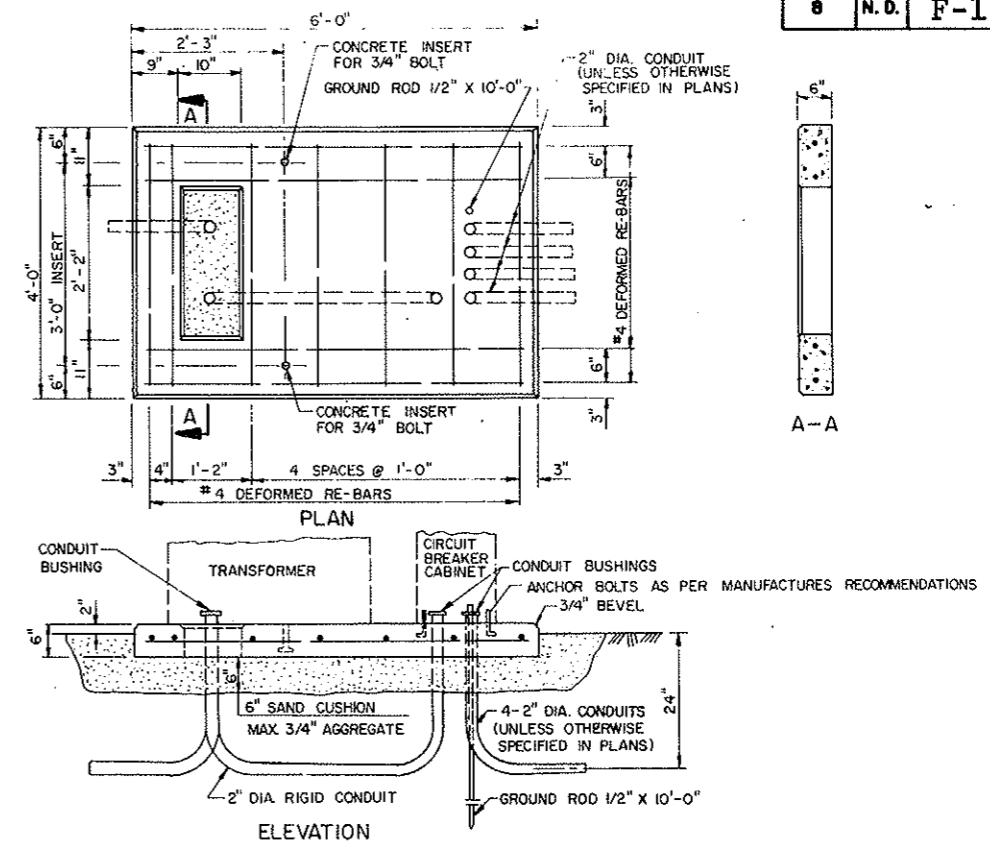


CONTROLLER CABINET FOUNDATION PAD MOUNT
The Controller Cabinet Foundation shall be bid as Concrete Foundations-Traffic Signals.



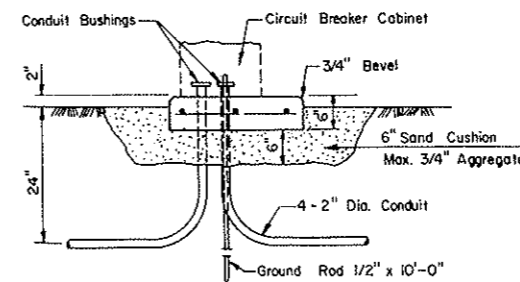
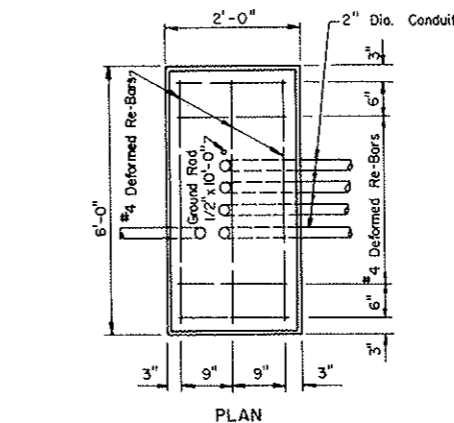
WORKING AREA SLAB

The Working Area Slab shall be installed where shown on the plans, and shall not be bid separately but shall be included in the price bid for Concrete Foundations-Traffic Signals.



TRANSFORMER & CIRCUIT BREAKER CABINET FOUNDATION PAD MOUNT

The Transformer & Circuit Breaker Cabinet Foundation Pad Mount shall be bid as Concrete Foundations-Feed Point Pad-Type A



CIRCUIT BREAKER CABINET FOUNDATION PAD MOUNT
The Circuit Breaker Cabinet Foundation Pad Mount shall be bid as Concrete Foundations-Feed Point Pad-Type B

NOTES:

Light & Signal Standard Foundations:

See plans for conduit size, number of bends and correct positioning for each foundation.

When conduit does not continue beyond the foundation, conduit with a 105° bend and bushings on both ends may be substituted for the 90° bends shown.

See plans for correct location of foundations. The grade and exact location shall be established by the Engineer in the field.

Ground rods are not required in foundations for the type II or III signal standards. Maximum anchor bolt circle for the 24" foundation shall not exceed 18". Maximum anchor bolt circle for the 36" foundation shall not exceed 30".

Pad Mounted Signal Control Cabinet Foundation:

See plans for the number of 90° bends per foundation and correct positioning.

Foundation for Pad Mounted Signal Control Cabinets shall be of sufficient size so that there is a minimum of 3" of clearance from the outside edge of cabinet to the outside edge of the foundation on any side. The Contractor shall insure a watertight seal between the control cabinet and the foundation by caulking, except for V groove.

Working Area Slab:

The materials and preparation of this slab shall be as approved by the Engineer in the field.

Transformer & Circuit Breaker Cabinet Foundation Pad Mounted:

Foundation shall have a wood float finish.

All conduits shown shall be installed. Conduit that is not used at this time shall be plugged.

Circuit Breaker Cabinet Foundation Pad Mounted:

Foundation shall have wood float finish.

All conduits shown shall be installed. Conduit that is not used at this time shall be plugged.

November 16, 1976	
REVISIONS	
DATE	CHANGES
3-18-77	Added type to pad foundation
9-28-77	Controller foundation depth
2-28-78	Tie bar note

NORTH DAKOTA	
STATE HIGHWAY DEPARTMENT	
Submitted:	<i>James Holt</i> Design Engineer
Recommended:	Ass't. Chief Engineer Pre-Const.
Approved:	<i>Robert...</i> Chief Engineer