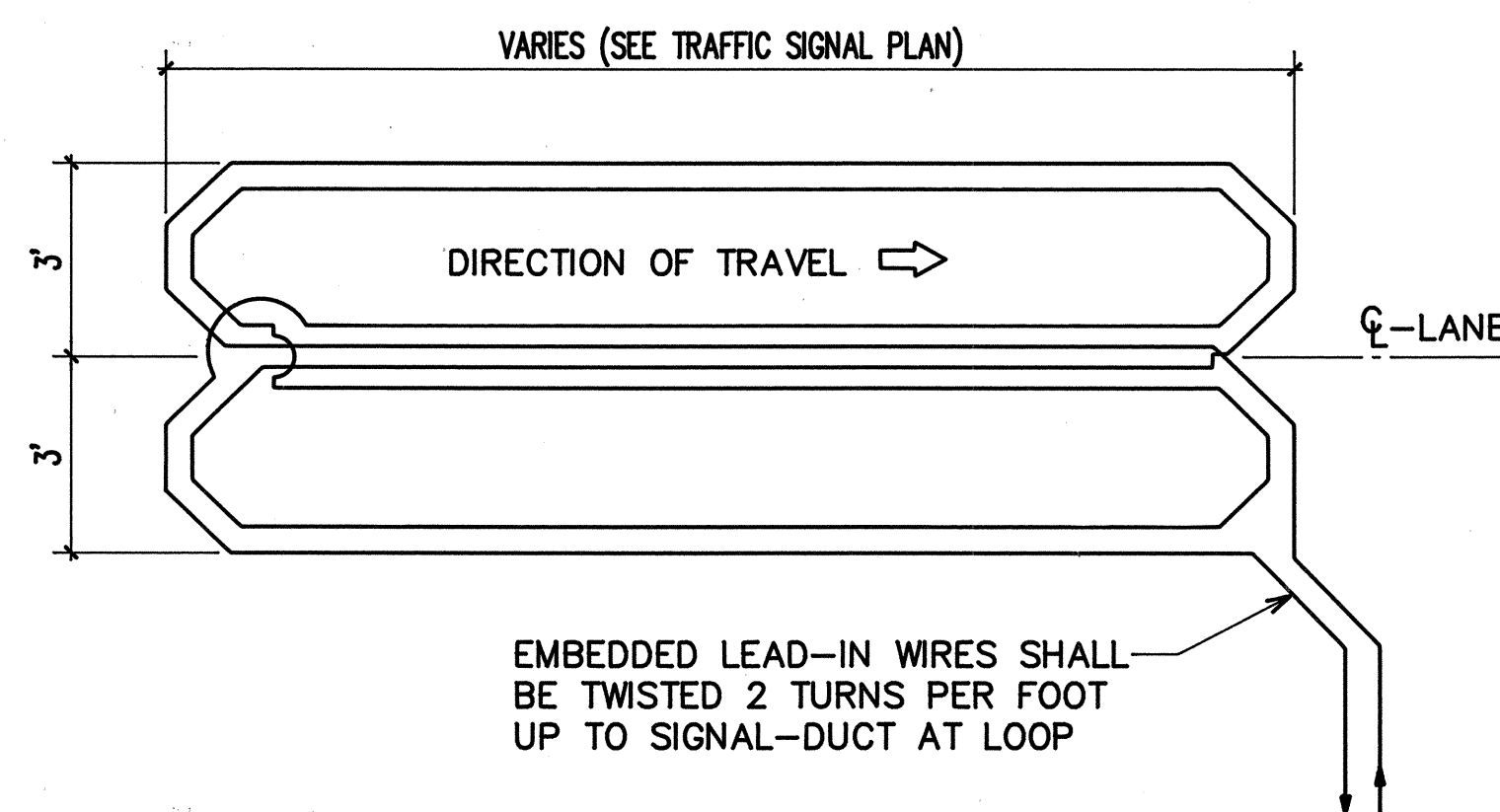
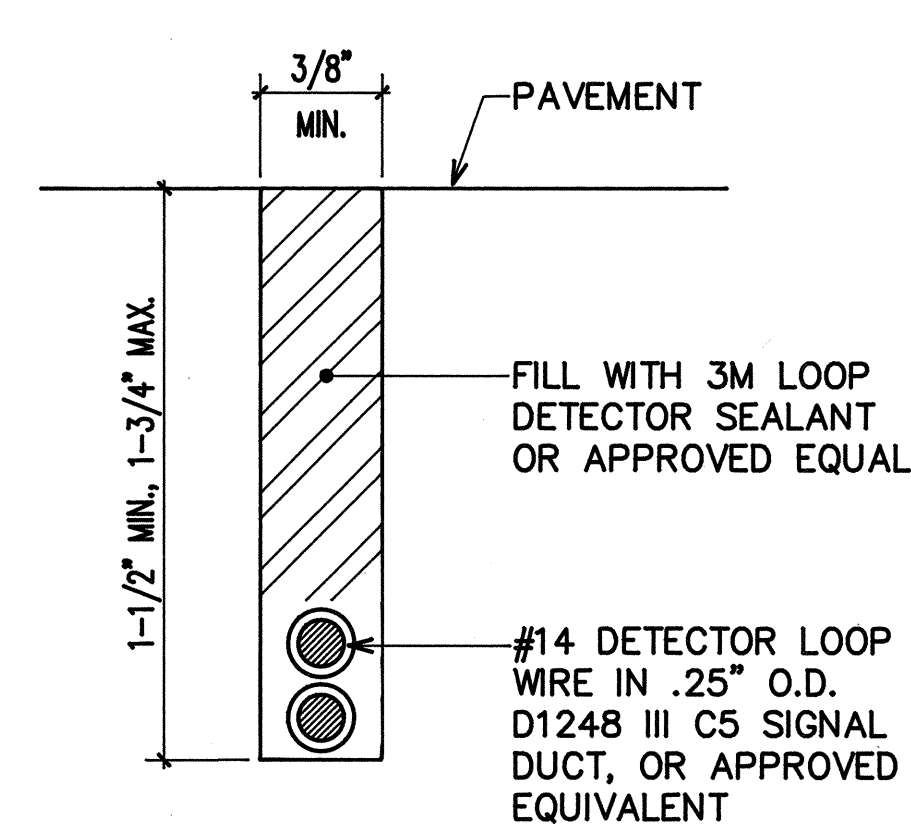


LOOP LAYOUT

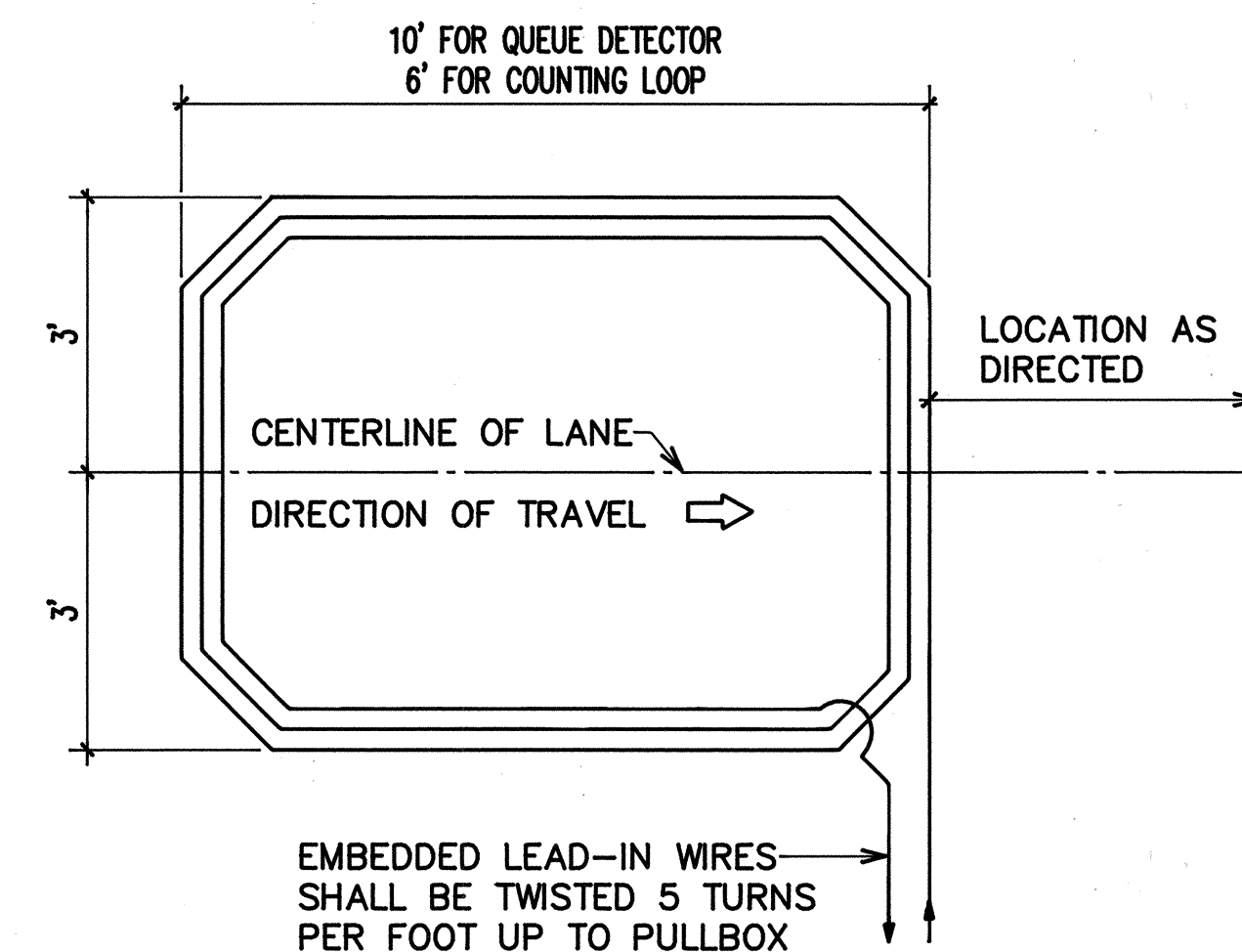
A LOOP DETECTOR (TYPICAL)
E-13 NOT TO SCALE



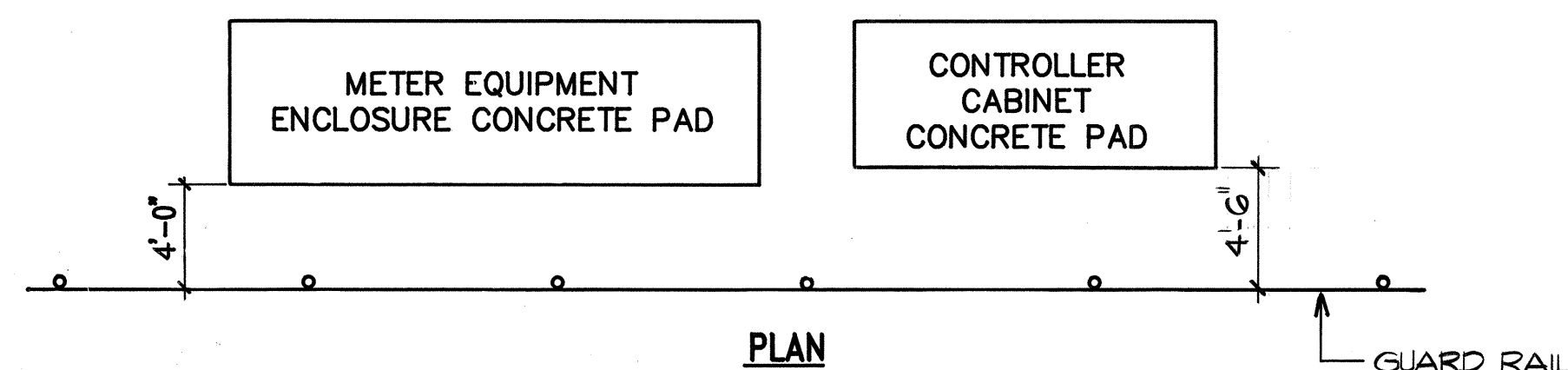
WIRING DIAGRAM



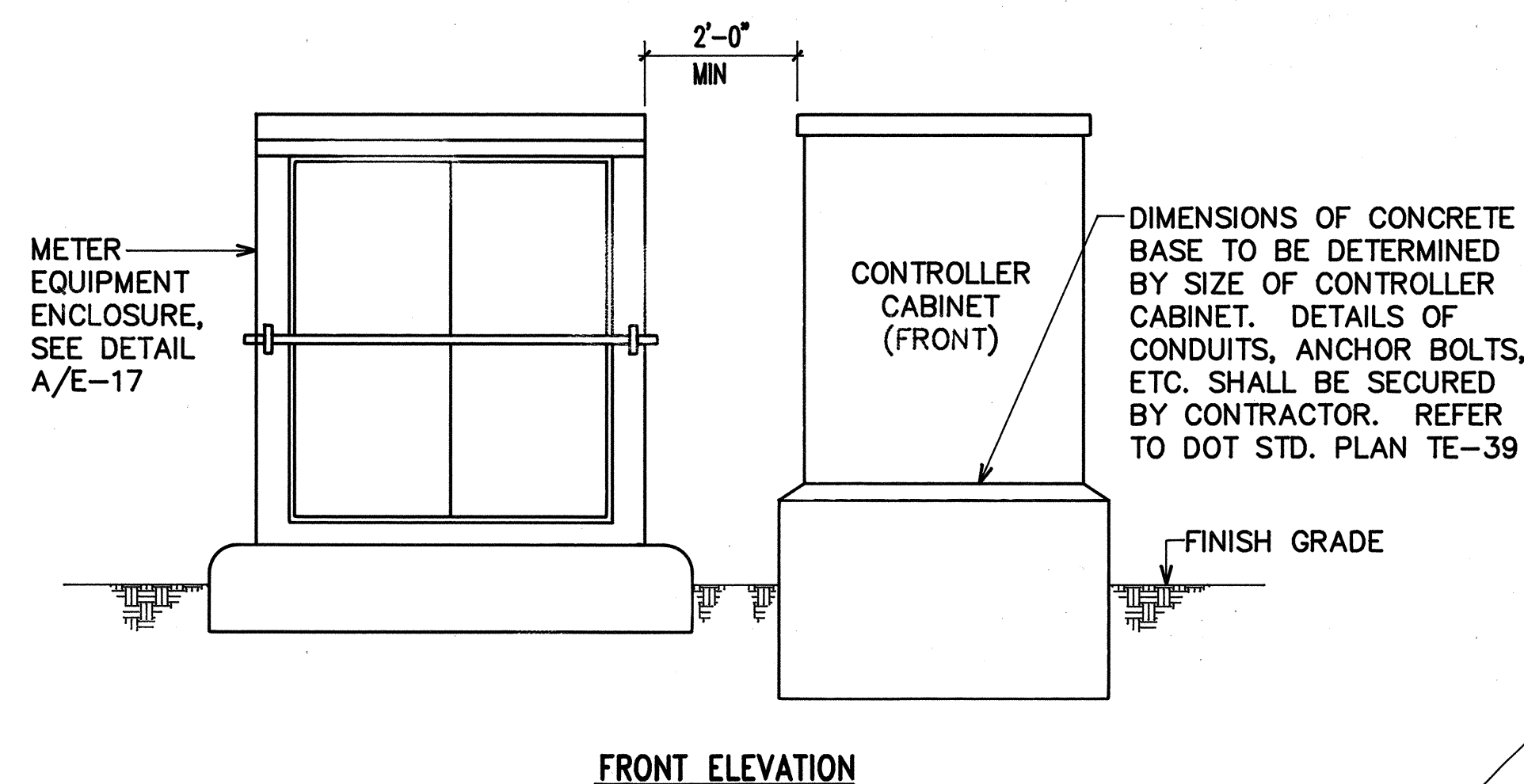
SECTION A



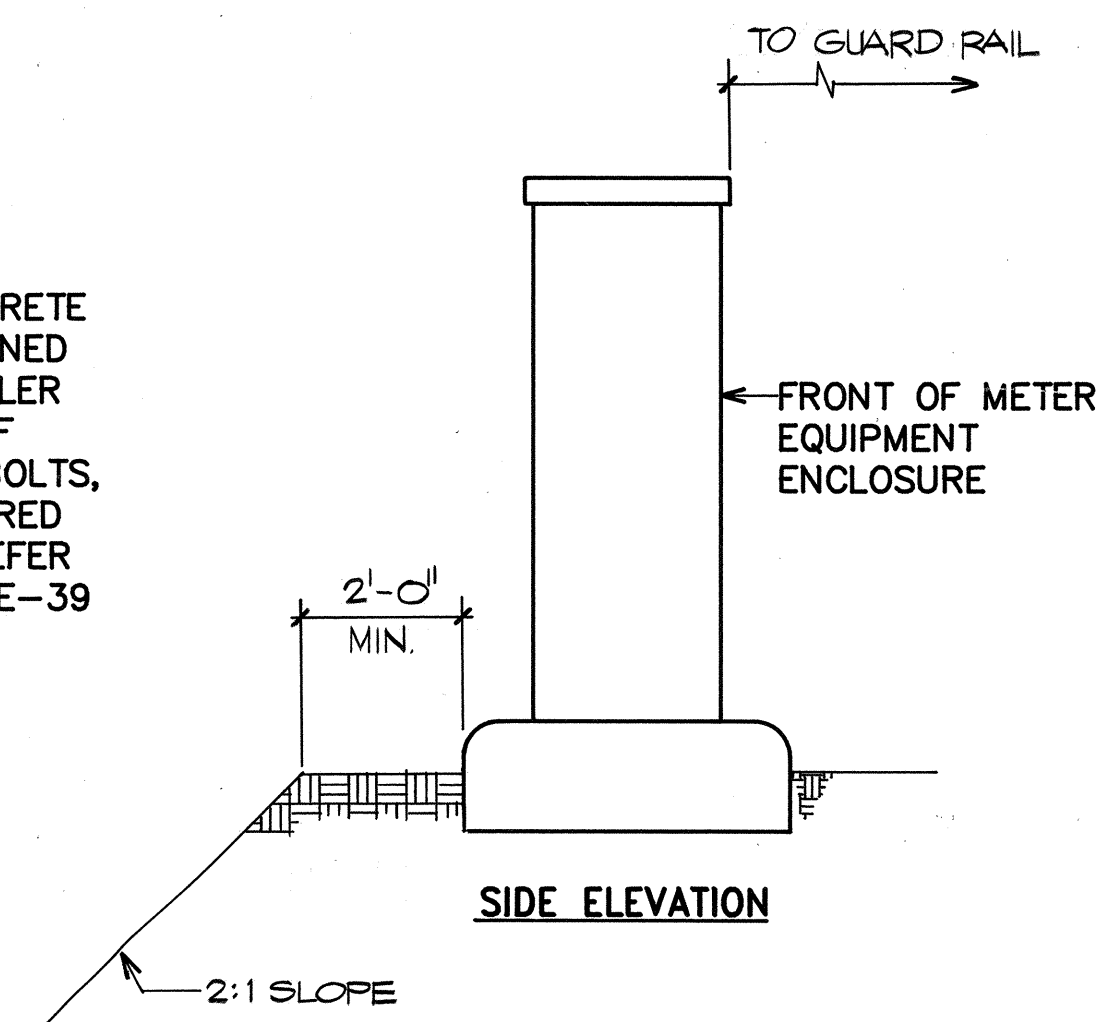
B WIRING DIAGRAM - QUEUE/COUNTING DETECTORS
E-13 NOT TO SCALE



PLAN

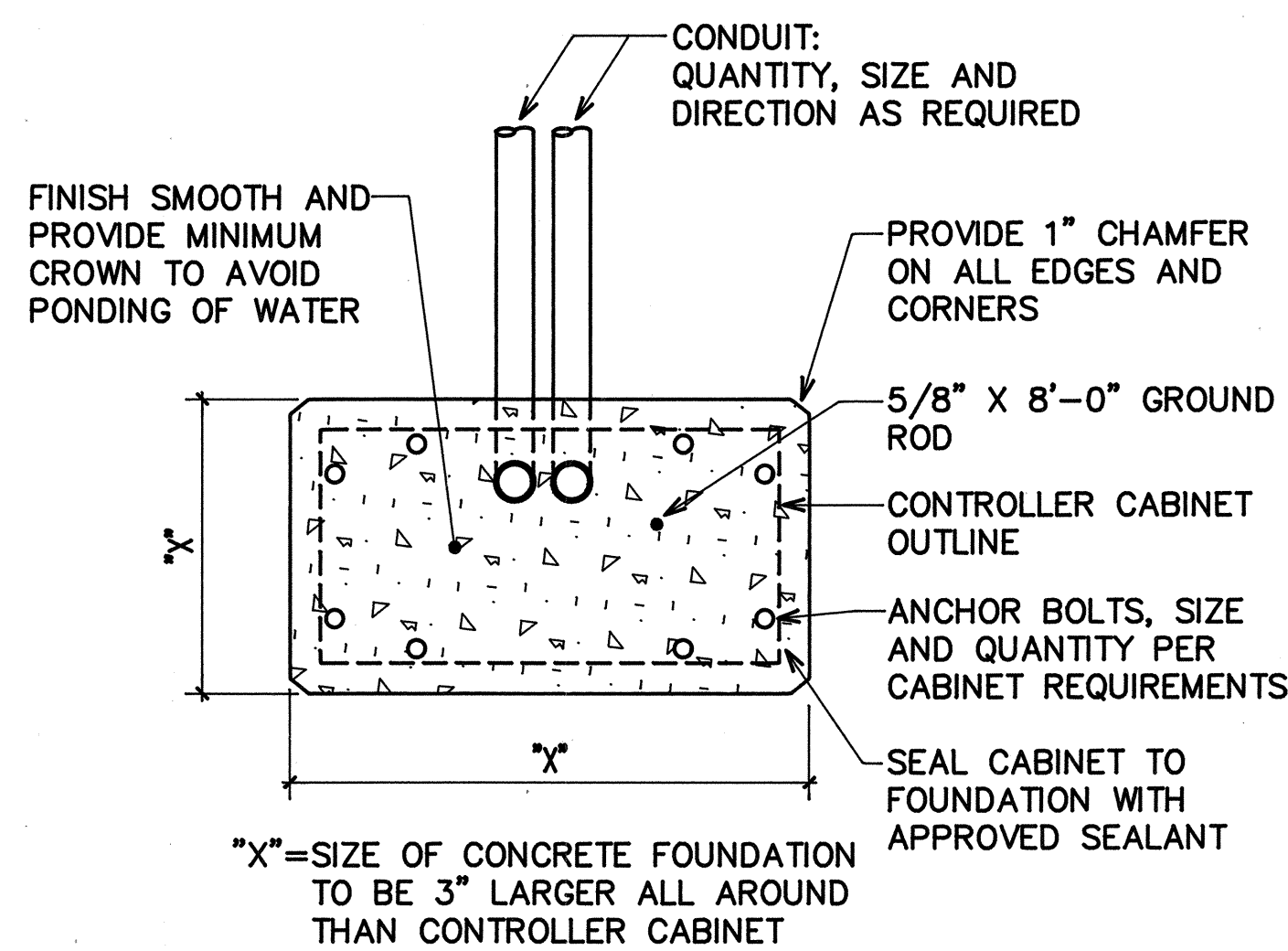


FRONT ELEVATION

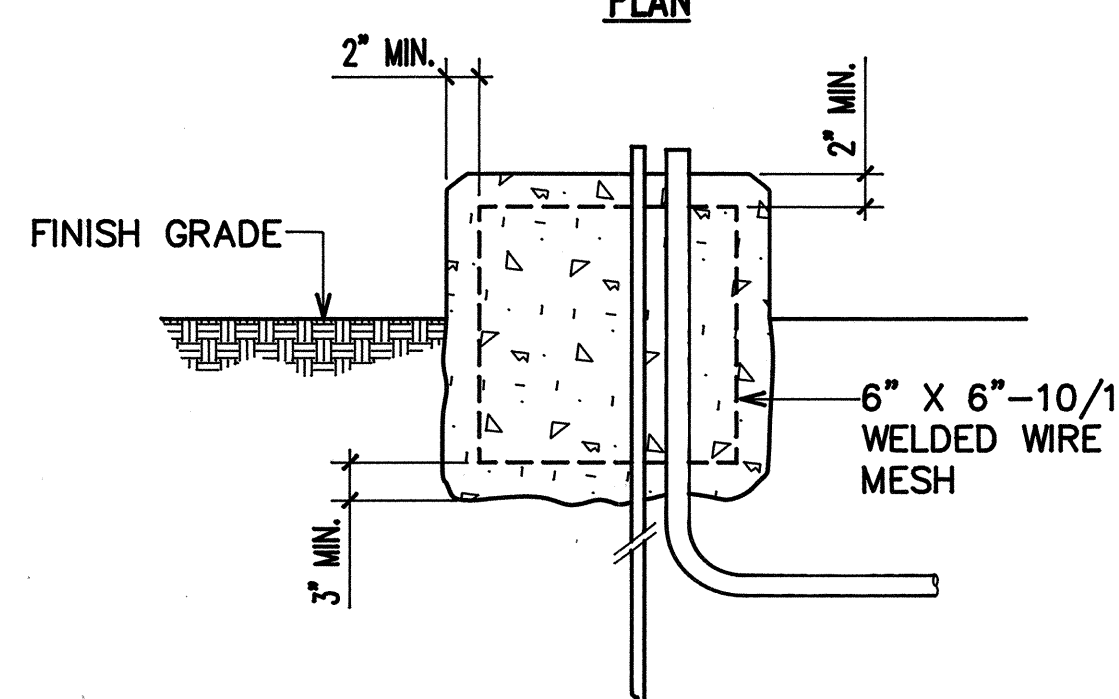


SIDE ELEVATION

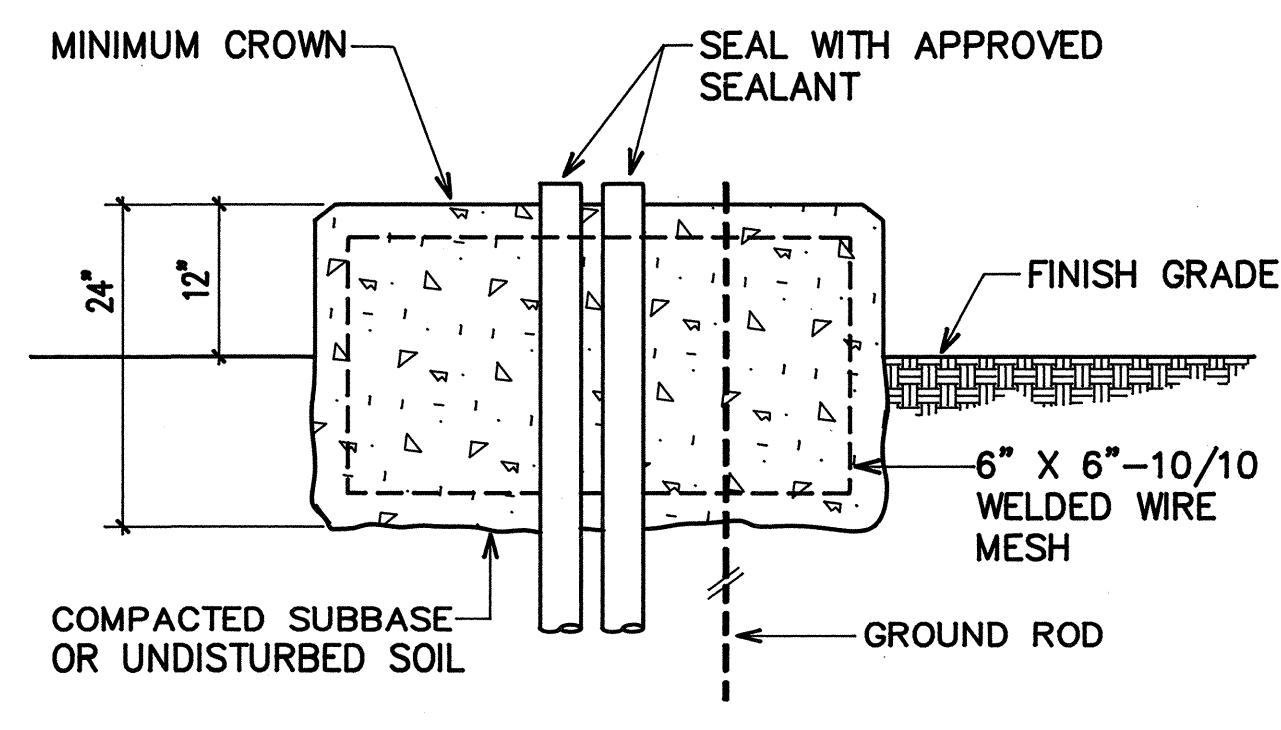
C ENCLOSURE ELEVATION
E-13 N.T.S.



PLAN



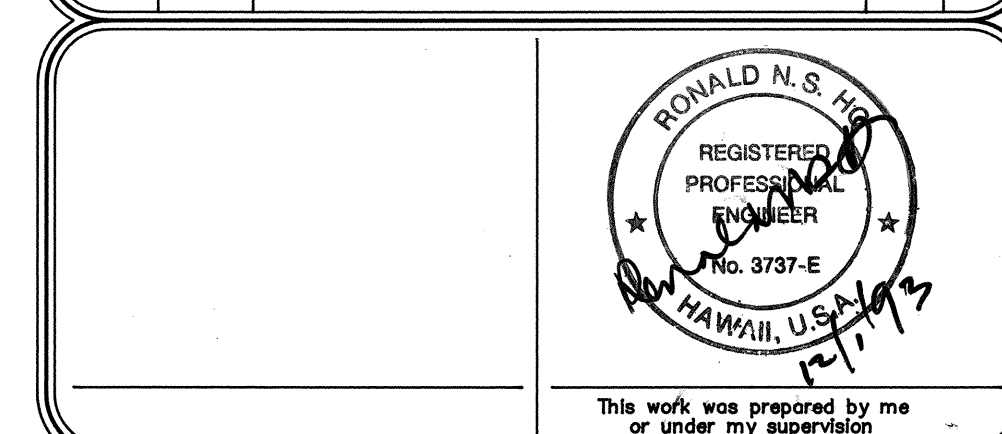
SIDE PLAN



FRONT SECTION

D CONTROLLER ASSEMBLY FOUNDATION DETAIL
E-13 NOT TO SCALE

Rev	Date	Description	Eng	App



BELT COLLINS ENGINEERING PLANNING LANDSCAPE ARCHITECTURE ENVIRONMENTAL CONSULTING

680 Ala Moana Blvd. First Floor Honolulu, Hawaii 96813
Phone: (808)521-5361 Fax: (808)536-7819

Consultant: **RONALD N. S. HO & ASSOCIATES, INC.**
Electrical Engineers
2138 Alagaba Street, Suite A Honolulu, Hawaii 96826
Phone: (808)941-0377 Fax: (808)943-2646

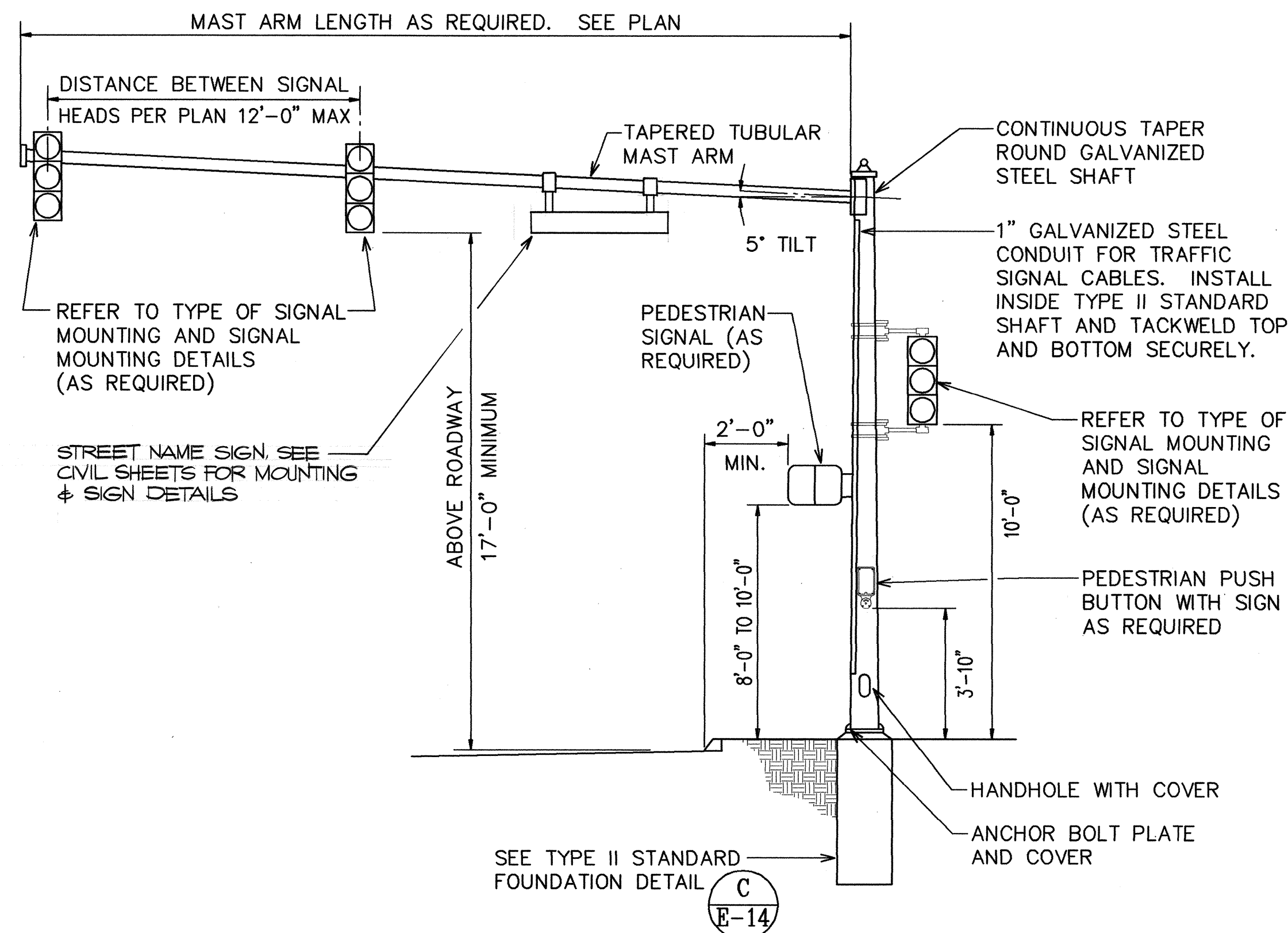
Client: **KM KONA PARTNERS**
PALAHI TOWER, SUITE 1410
1001 BISHOP STREET
HONOLULU, HAWAII 96813
PHONE: 545-7722 FAX: 545-7725

MAKALAPUA
QUEEN KAAHUMANU HIGHWAY AND MAKALAPUA
QUEEN LILUOKALANI BLVD. INTERSECTION
LOOP DETECTOR & TRAFFIC SIGNAL
CONTROLLER DETAILS

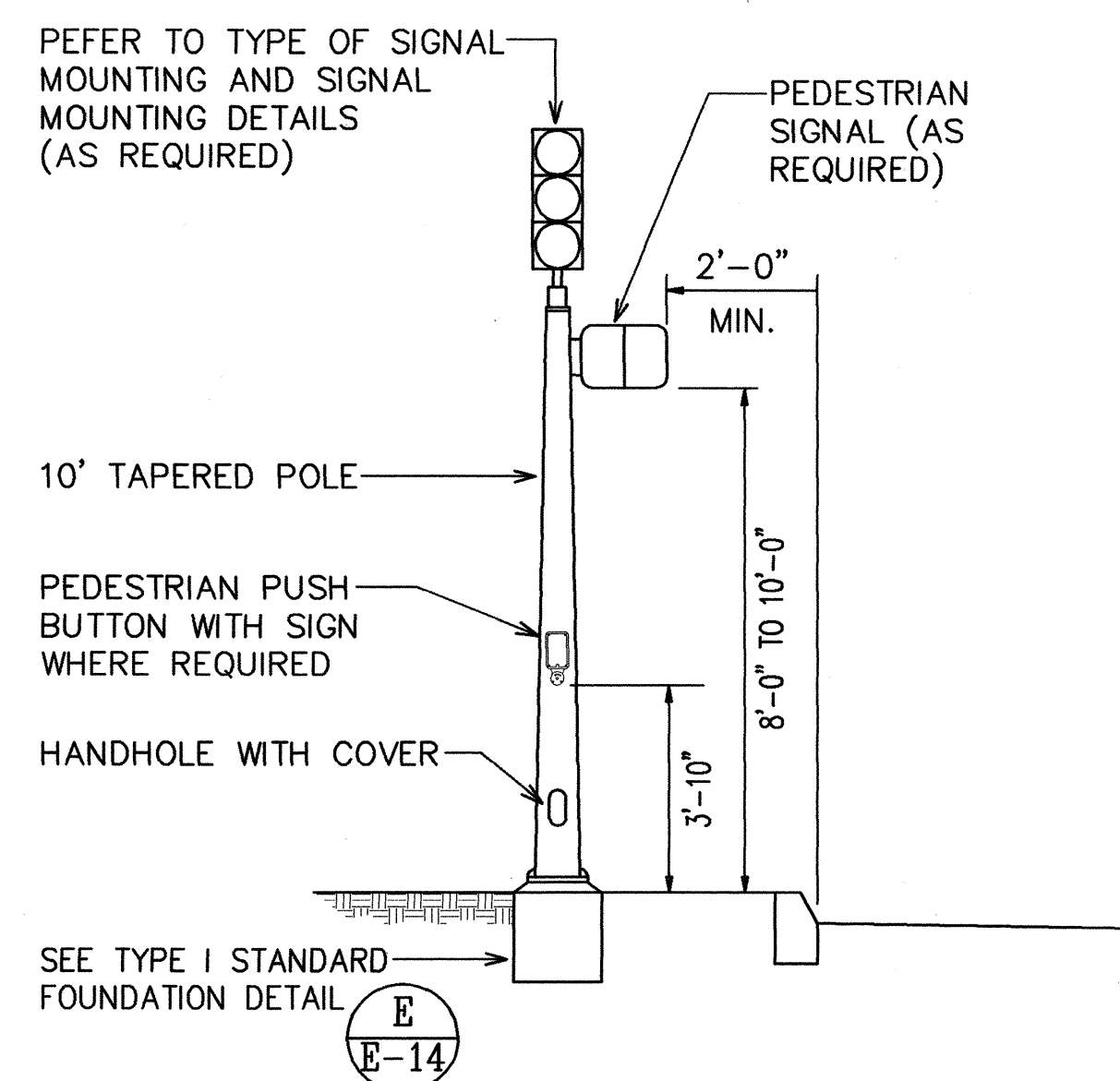
Designed By: **SI** Drawn By: **GN**
Project No. **333.5000** Date: **OCTOBER 1993**
Approved By: _____

Left: 11/29/93 @ 07:46:53
In: 11/29/93 11:53:00

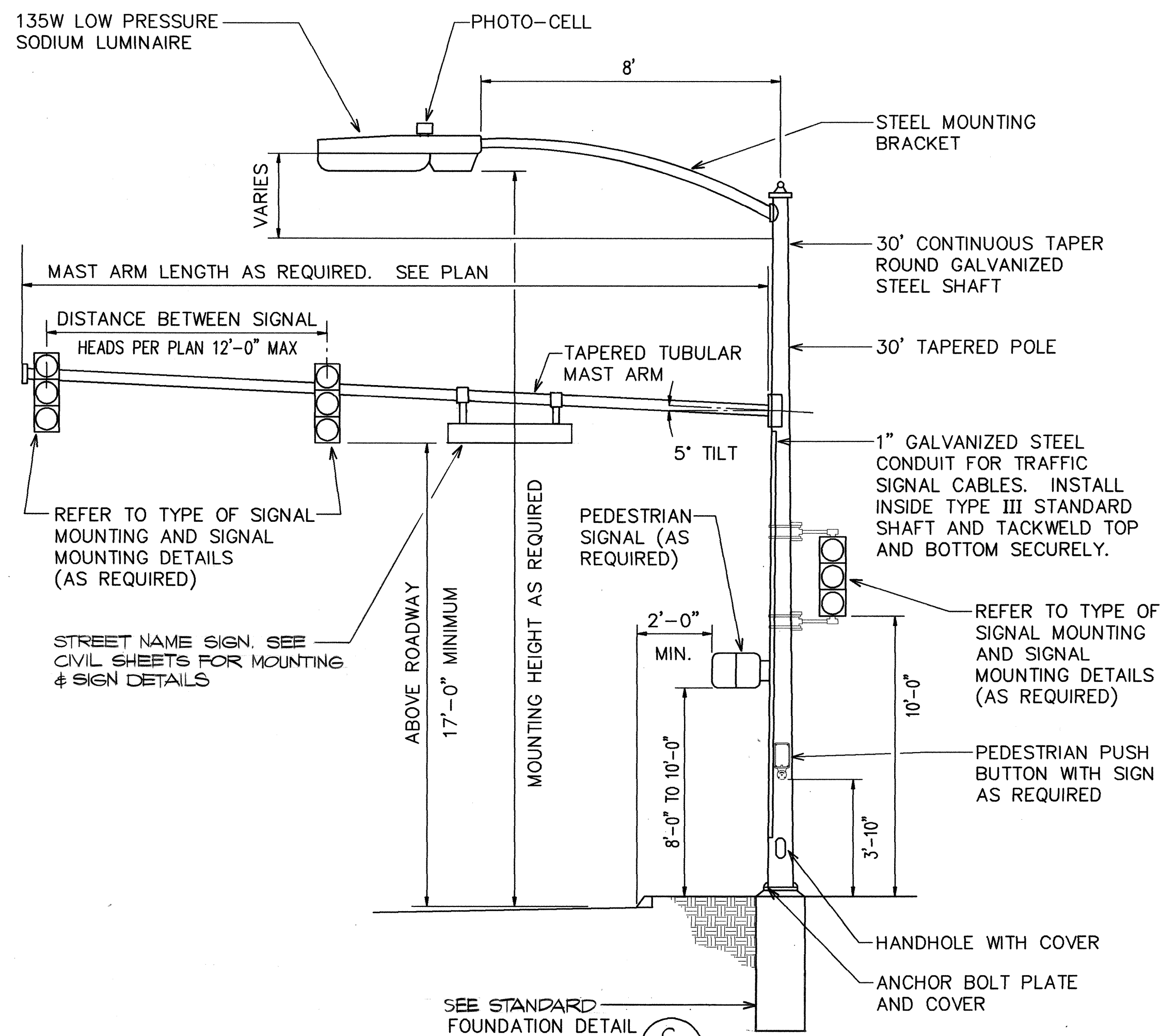
FILE	PROJECT	FOLDER	NO.



A TYPE II TRAFFIC SIGNAL STANDARD
E-14 NOT TO SCALE



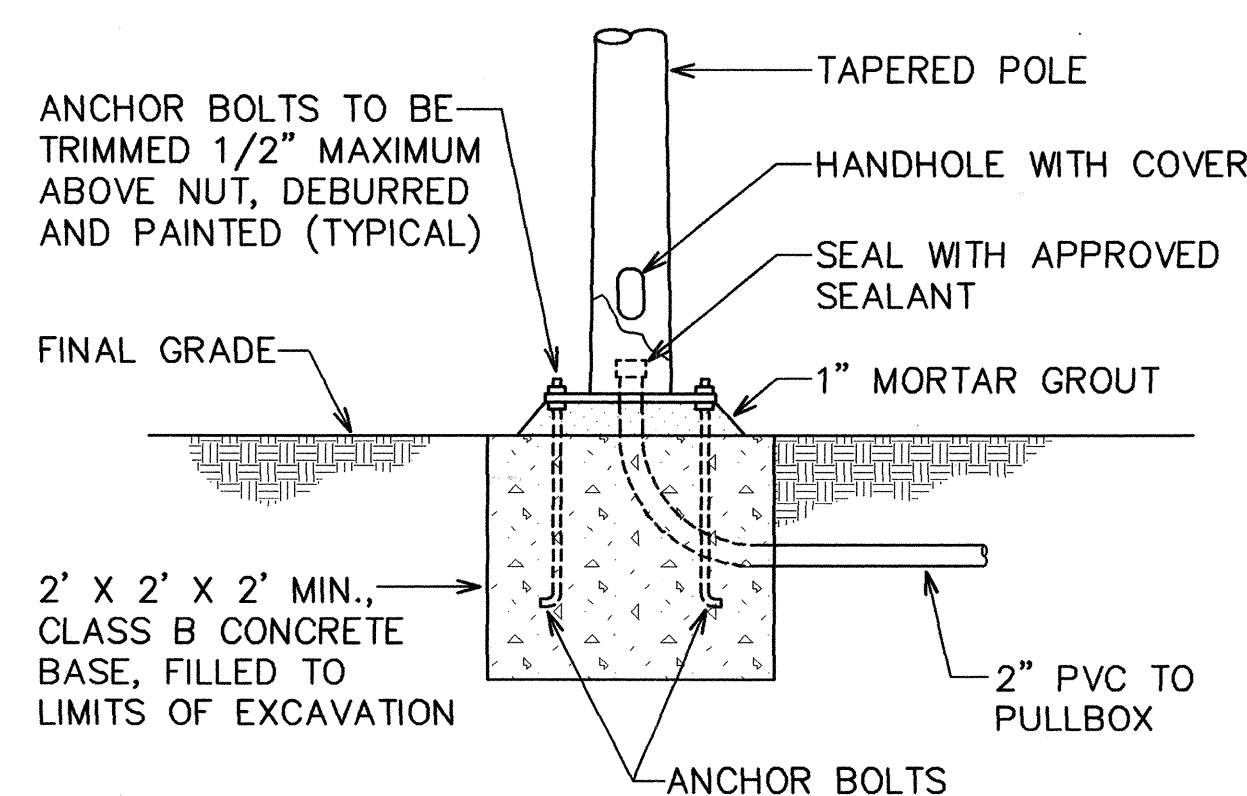
D TYPE I TRAFFIC SIGNAL STANDARD
E-14 NOT TO SCALE



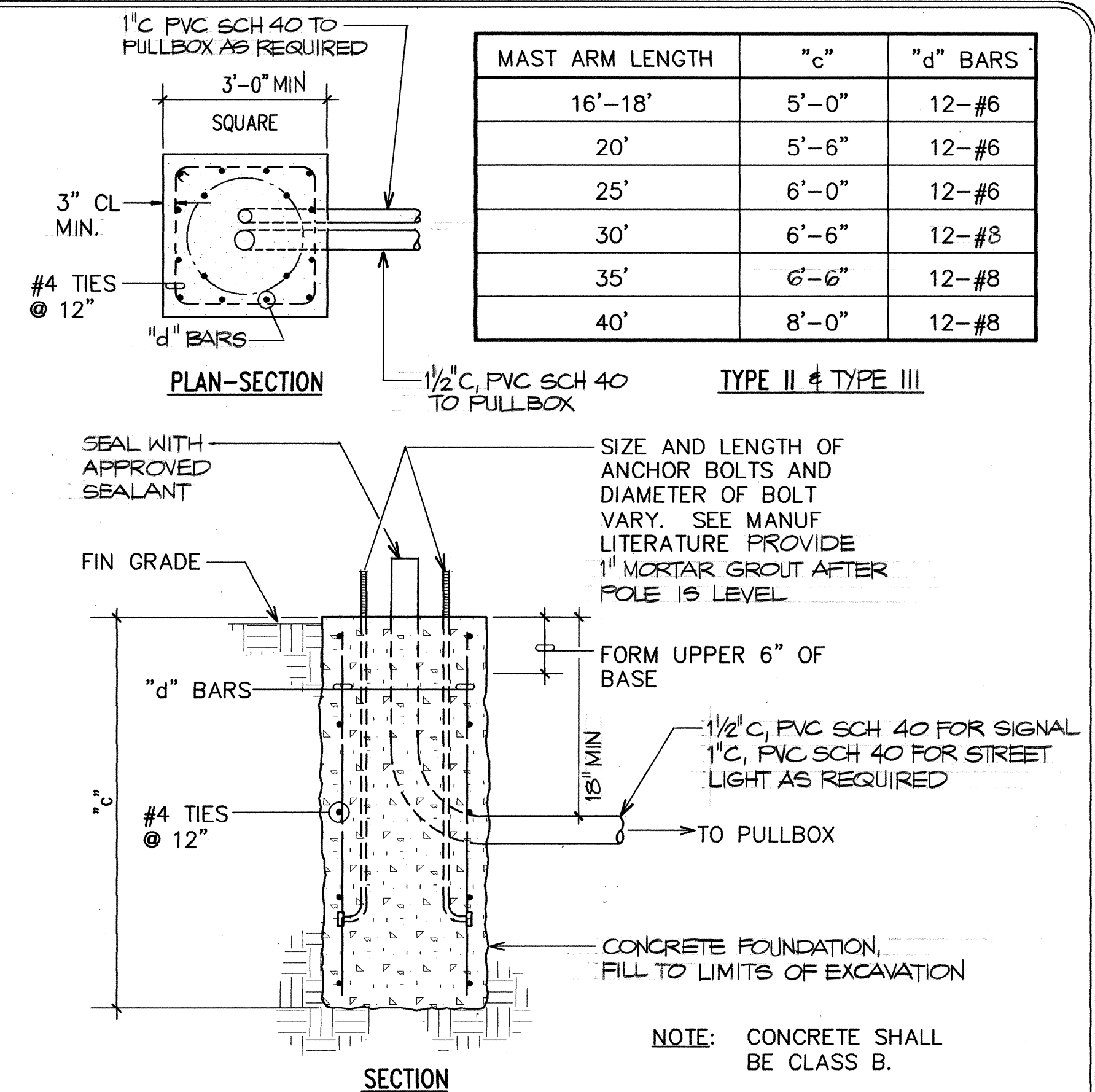
NOTES:

- ITEM FOR TYPE III TRAFFIC SIGNAL STANDARD WITH MAST ARM AND FOUNDATION INCLUDES HIGHWAY LIGHTING BRACKET ARM.
- SIZE, LENGTH, AND DIAMETER OF ANCHOR BOLTS SHALL BE AS RECOMMENDED BY THE MANUFACTURER. CONTRACTOR SHALL SUBMIT CATALOG CUTS TO THE ENGINEER FOR APPROVAL.

B TYPE III TRAFFIC SIGNAL STANDARD
E-14 NOT TO SCALE

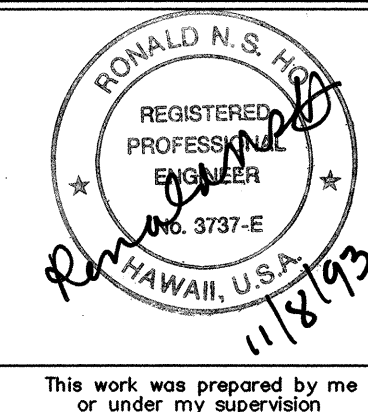


E TYPE I STANDARD FOUNDATION DETAIL
E-14 NOT TO SCALE



C TYPE II & III STANDARD FOUNDATION DETAIL
E-14 NOT TO SCALE

Rev	Date	Description	Eng	App



BELT COLLINS ENGINEERING PLANNING LANDSCAPE ARCHITECTURE ENVIRONMENTAL CONSULTING

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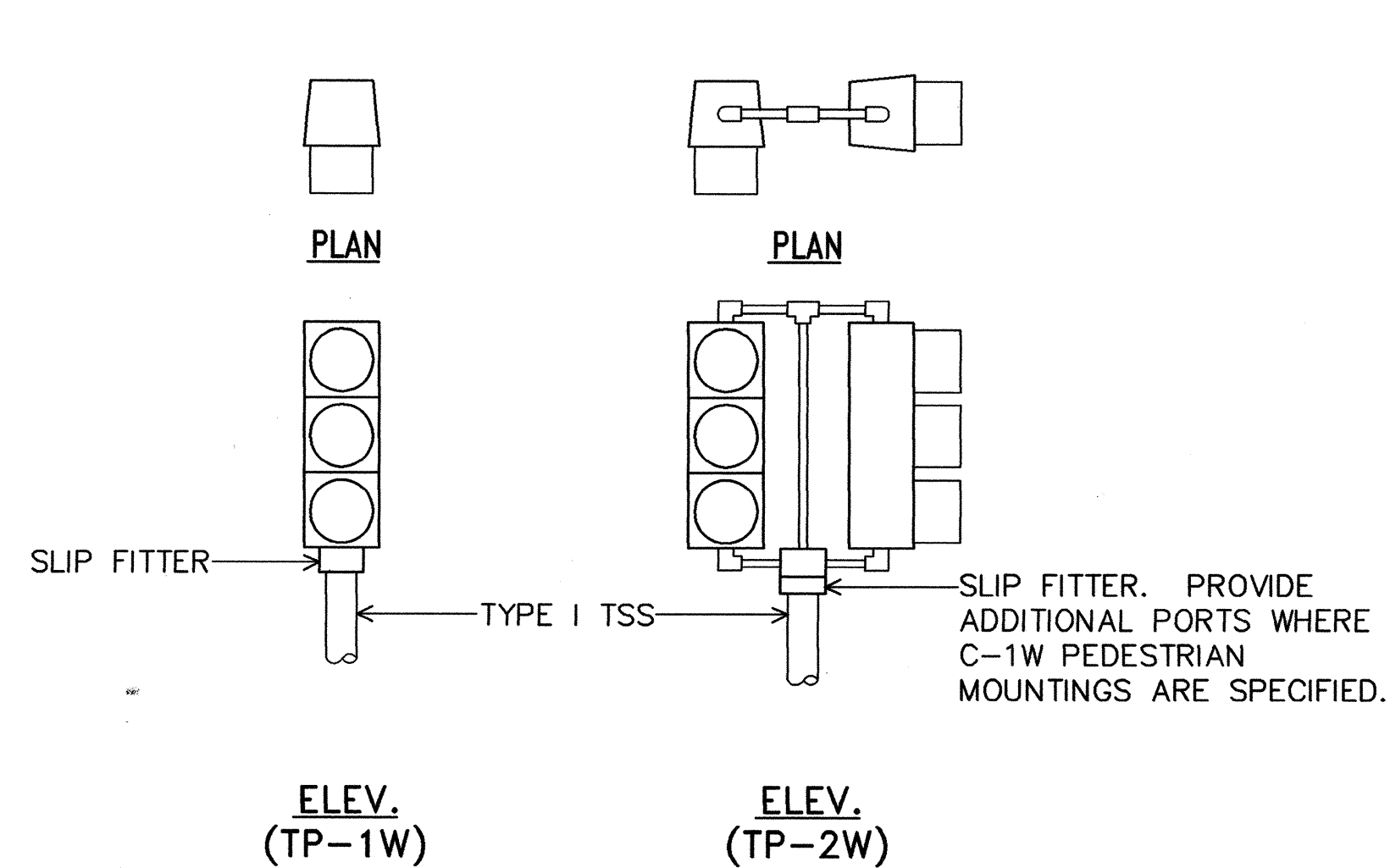
MAKALAPUA QUEEN KAAHUMANU HIGHWAY AND MAKALAPUA BLVD INTERSECTION

TRAFFIC SIGNAL DETAILS

Designed By: **SI** Drawn By: **GN**
Project No. **333.5000** Date: **OCTOBER 1993**

Approved By: _____

FILE	POCKET	FOLDER	NO.



NOTE: SEE DETAIL AT RIGHT FOR PROGRAMMED SIGNAL FACES.

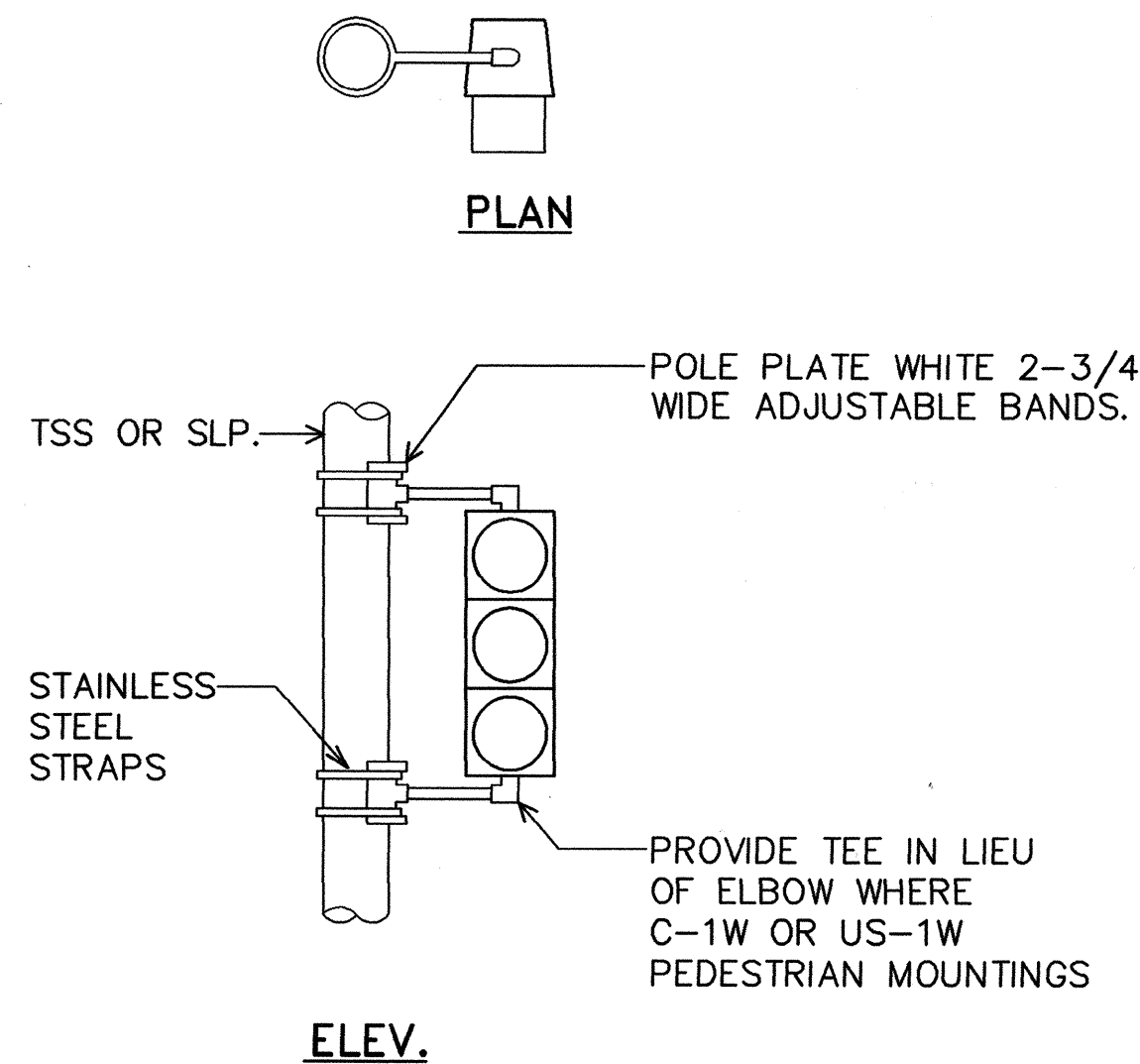
NOTE: MAINTAIN 16" MIN. CLEARANCE AT REAR OF ALL PROGRAMMED FACES.

TOP OF POLE - 1 WAY

TOP OF POLE - 2 WAY

TYPE I

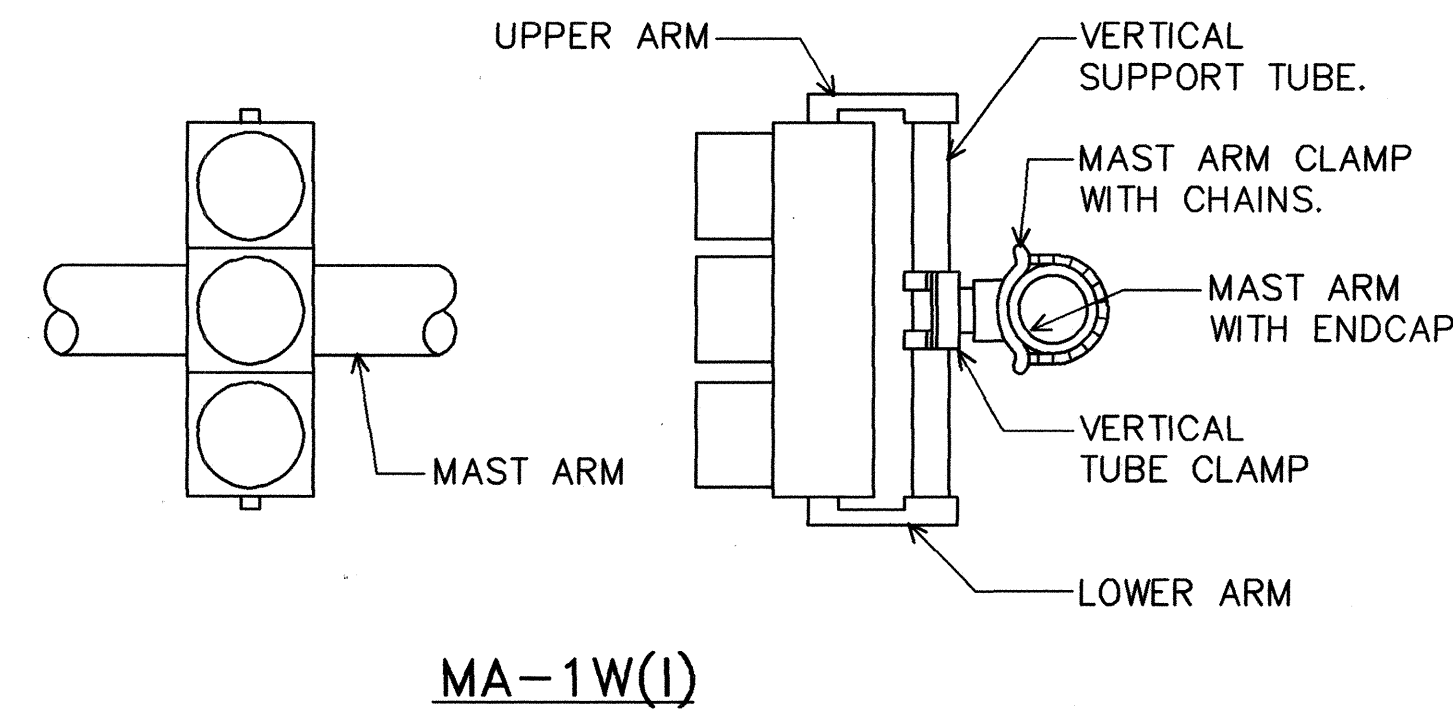
POST TOP MOUNTING, ONE WAY & TWO WAY



NOTE: MAINTAIN 16" MIN. CLEARANCE AT REAR OF ALL PROGRAMMED FACES.

TYPE V

SIDE POLE MOUNTING, ONE WAY, WOOD AND METAL

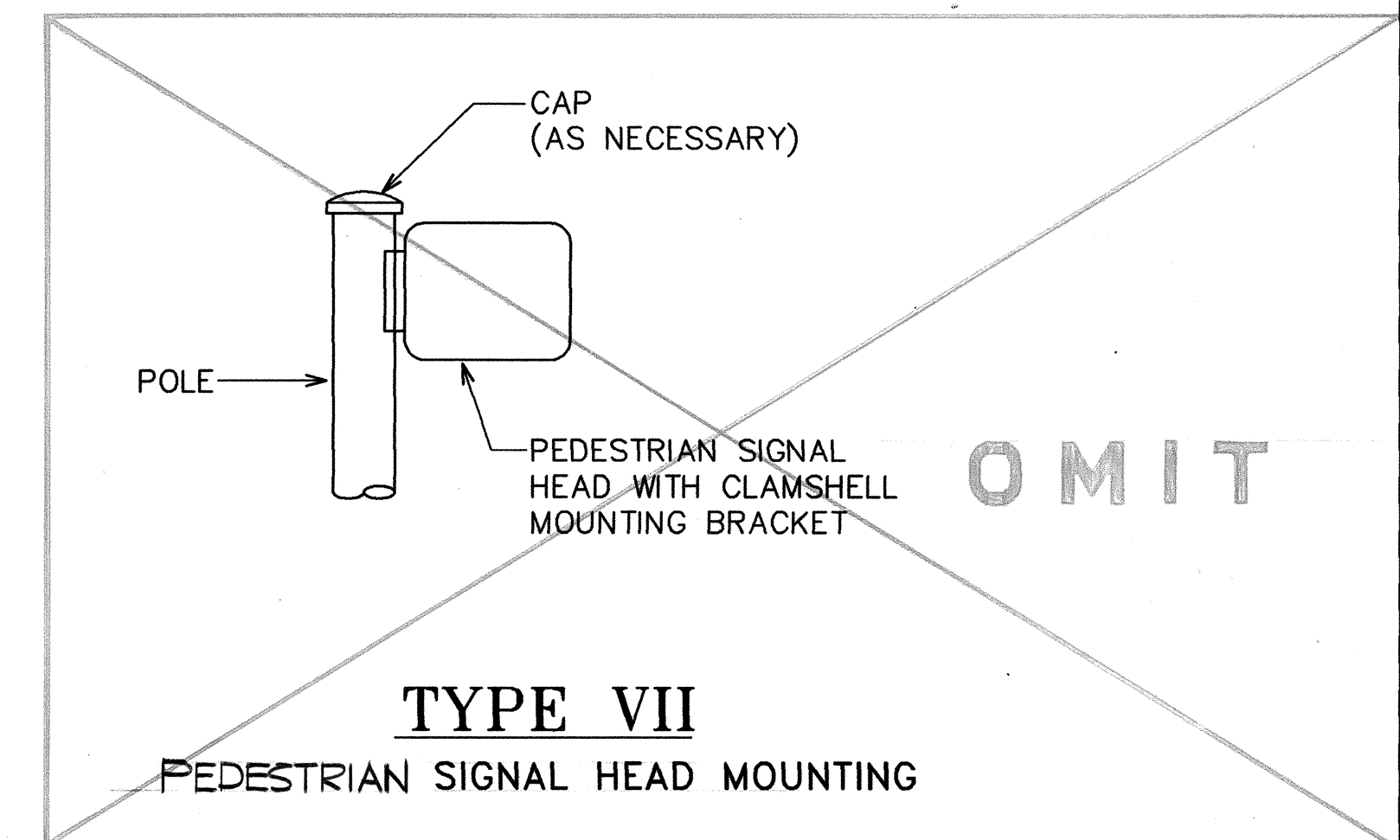


NOTES:

1. USE THIS DETAIL FOR ALL MAST ARM MOUNTINGS AT INTERMEDIATE POINTS ALONG MAST ARM.
2. USE "CONCEALED" WIRING.
3. FURNISH MOUNTING THAT IS COMPATIBLE WITH TYPE OF SIGNAL TO BE INSTALLED.

TYPE VI

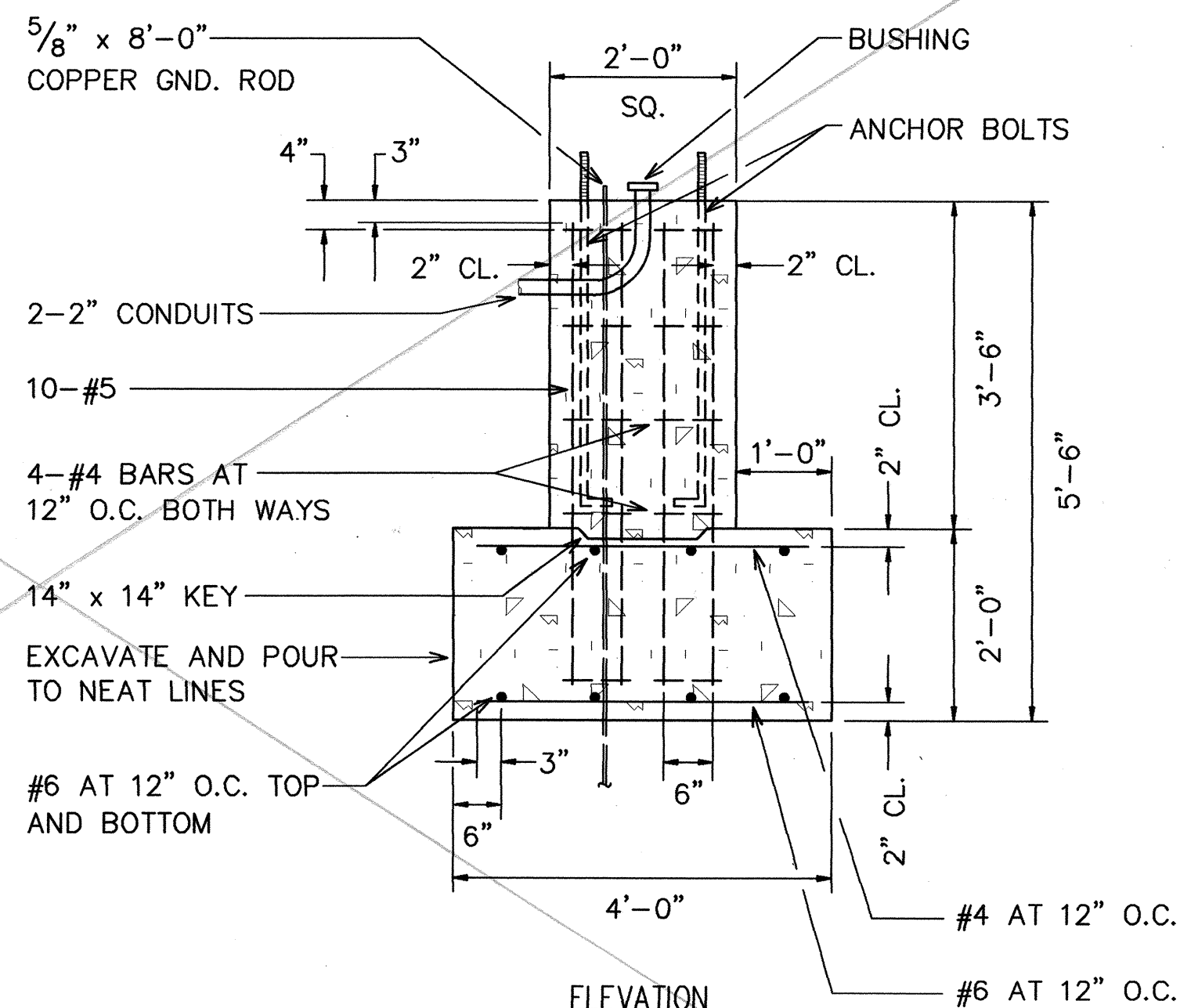
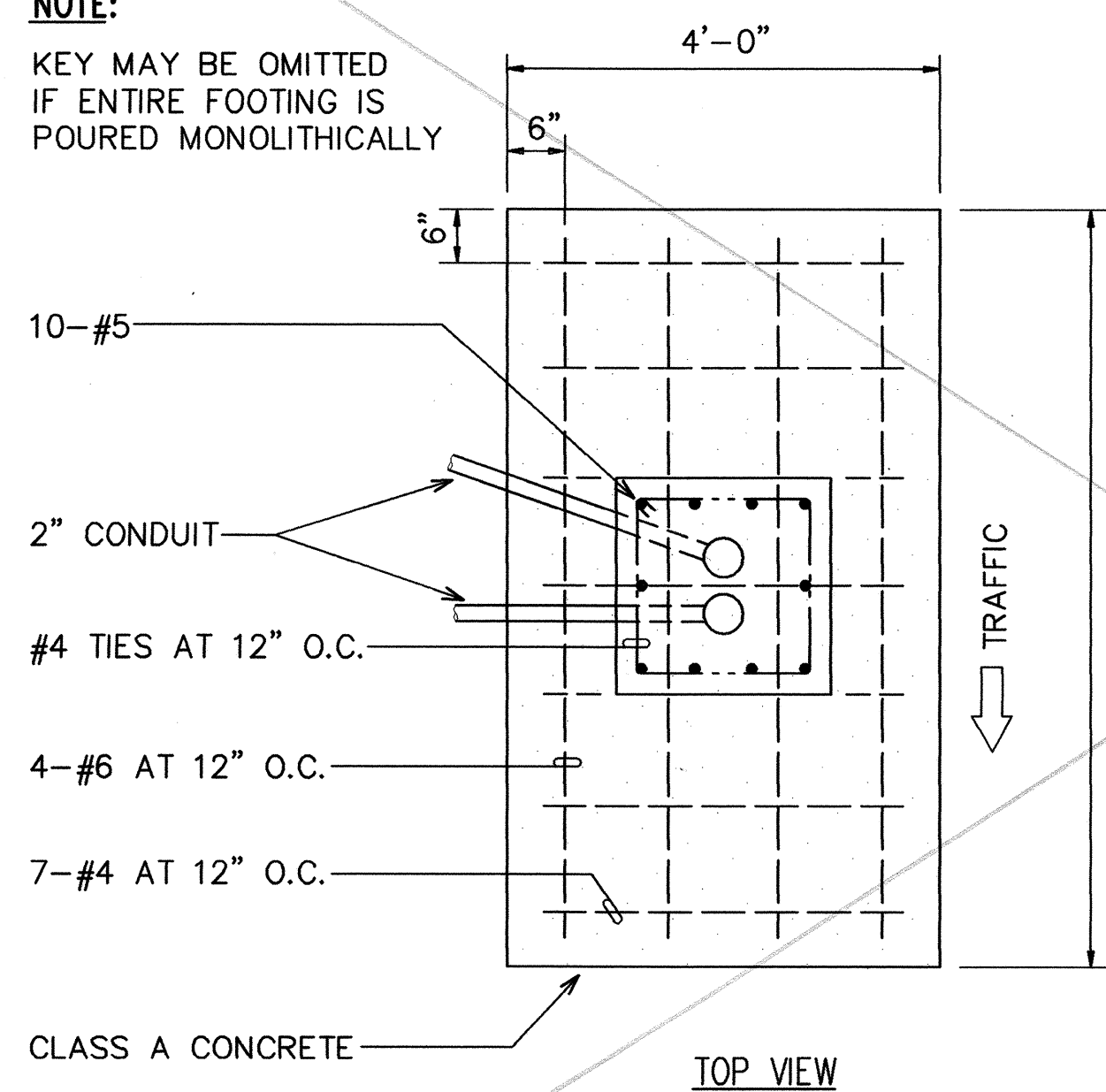
ADJUSTABLE MAST ARM MOUNTING



A TRAFFIC SIGNAL MOUNTING DETAILS

E-15 NOT TO SCALE

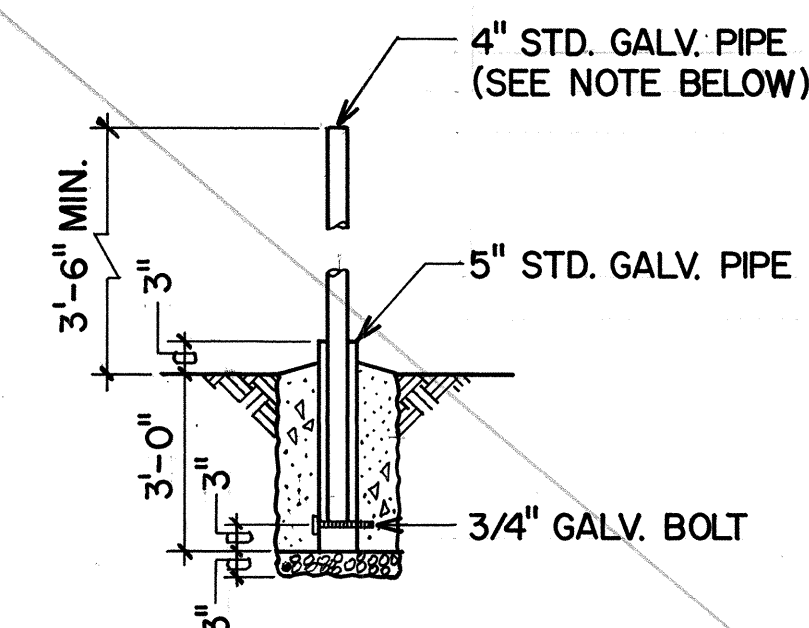
NOTE: KEY MAY BE OMITTED IF ENTIRE FOOTING IS POURED MONOLITHICALLY



OMIT

B TYPE III STANDARD FOUNDATION DETAIL

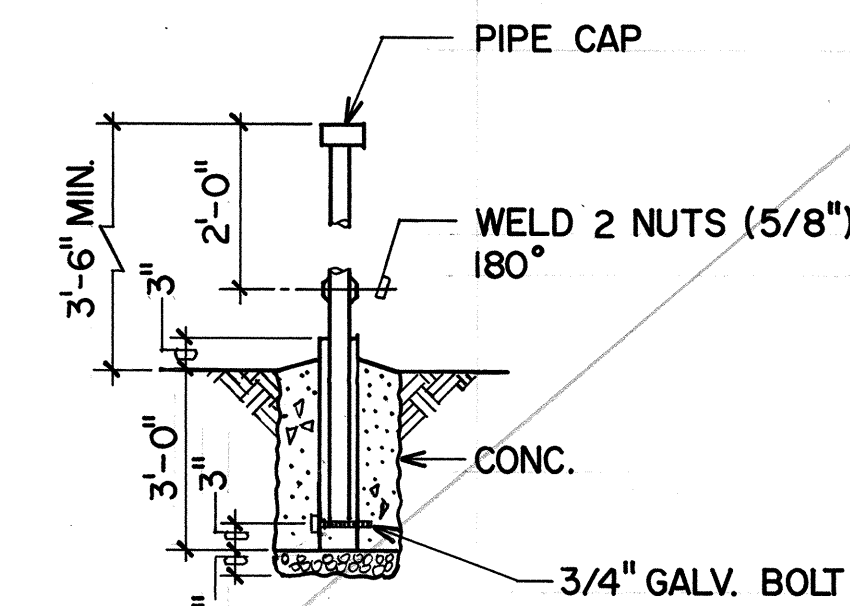
E-15 NOT TO SCALE



THE 4" STANDARD GALV. PIPE TO BE FILLED WITH CONCRETE TO WEIGH APPROXIMATELY 150 LBS.

STANCHION

NOTE: BARRIER POSTS ARE TO BE PAINTED YELLOW AS PER ANSI SPEC. Z53.1 TO COMPLY WITH THE OSHA STANDARDS FOR COLOR CODING.



THE PIPE THAT IS TO BE PLACED DIRECTLY IN FRONT OF THE DOORS SHALL NOT BE FILLED WITH CONCRETE. THE PIPE SHALL BE CAPPED AND THE WELDED NUTS ARE FOR SCREWING IN BOLTS TO ACT AS "HANDLES" FOR LIFTING. THE BOLTS ARE TO BE REMOVED AFTER INSTALLATION.

REMOVABLE STANCHION

C STANCHION DETAILS

E-15 NOT TO SCALE

OMIT

Rev	Date	Description	Eng	App

This work was prepared by me or under my supervision	

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MAKALAPUA QUEEN KAAHUMANU HIGHWAY AND MAKALAPUA BLVD. INTERSECTION TRAFFIC SIGNAL DETAILS	
Designed By: SI Project No: 333.5000 Approved By:	Drawn By: CN Date: OCTOBER 1993

FILE	POCKET	FOLDER	NO.