

PLANS SYMBOLS

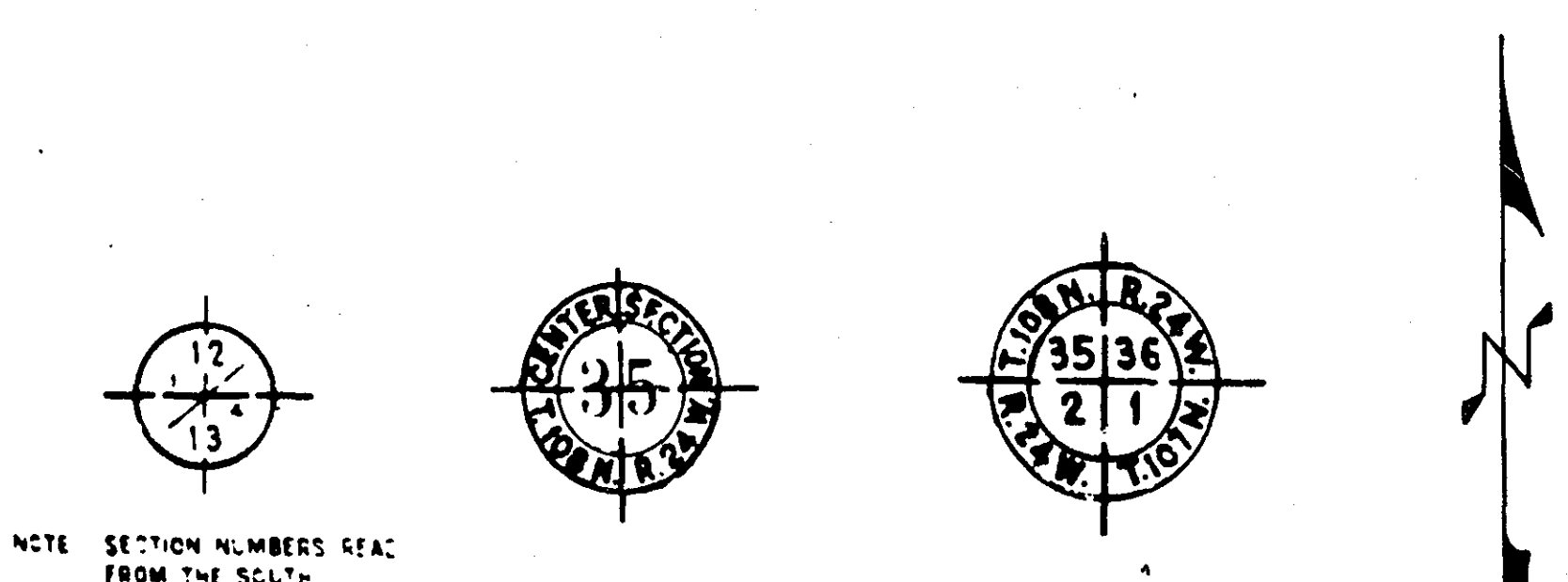
STATE LINE	----
COUNTY LINE	----
TOWNSHIP OR RANGE LINE	----
SECTION LINE	----
QUARTER LINE	----
SIXTEENTH LINE	----
RIGHT OF WAY LINE	----
PRESENT RIGHT OF WAY LINE	----
CONTROL OF ACCESS LINE	----
PROPERTY LINE (Except Land Lines)	----
VACATED PLATTED PROPERTY	----
CORPORATE OR CITY LIMITS	----
TRUNK HIGHWAY CENTER LINE	----
RETAINING WALL	----
RAILROAD	----
RAILROAD RIGHT OF WAY LINE	----
RIVER OR CREEK	----
DRY RUN	----
DRAINAGE DITCH	----
DRAIN TILE	----
CULVERT	----
PROPHILET	----
GUARD RAIL	----
BARBED WIRE FENCE	----
WOVEN WIRE FENCE	----
CHAIN LINK FENCE	----
RAILROAD SNOW FENCE	----
STONE WALL OR FENCE	----
HEDGE	----
RAILROAD CROSSING SIGN	----
RAILROAD CROSSING BELL	----
ELECTRIC WARNING SIGN	----
CROSSING GATE	----
MEANDER CORNER	----

SPRINGS	----
MARSH	----
TIMBER	----
ORCHARD	----
BRUSH	----
NURSERY	----
CATCH BASIN	----
FIRE HYDRANT	----
CATTLE GUARD	----
OVERPASS (Highway Over)	----
UNDERPASS (Highway Under)	----
BRIDGE	----
BUILDING (One Story Frame)	----
F. FRAME	----
S. STONE	----
B. BRICK	----
ST. STUCCO	----
C. CONCRETE	----
T. TILE	----
ST. STUCCO	----
IRON PIPE OR ROD	----
MONUMENT (STONE, CONCRETE, OR METAL)	----
WOODEN HUB	----
GRAVEL PIT	----
SAND PIT	----
BORROW PIT	----
ROCK QUARRY	----

UTILITIES SYMBOLS

POWER POLE LINE	----
TELEPHONE OR TELEGRAPH POLE LINE	----
JOINT TELEPHONE AND POWER ON POWER POLES	----
ON TELEPHONE POLES	----
ANCHOR	----
STEEL TOWER	----
STREET LIGHT	----
PERMANENT TELEPHONE CABLE TERMINAL	----
GAS MAIN	----
WATER MAIN	----

CONDUIT	----
TELEPHONE CABLE IN CONDUIT	----
ELECTRIC CABLE IN CONDUIT	----
TELEPHONE-MANHOLE	----
ELECTRIC MANHOLE	----
BURIED TELEPHONE CABLE	----
BURIED ELECTRIC CABLE	----
AERIAL TELEPHONE CABLE	----
SEWER, (SANITARY OR STORM)	----
SEWER MANHOLE	----



PIT DATA

PIT NO.	Located in
PIT NO.	Dead Haul
PIT NO.	Located in
PIT NO.	Dead Haul

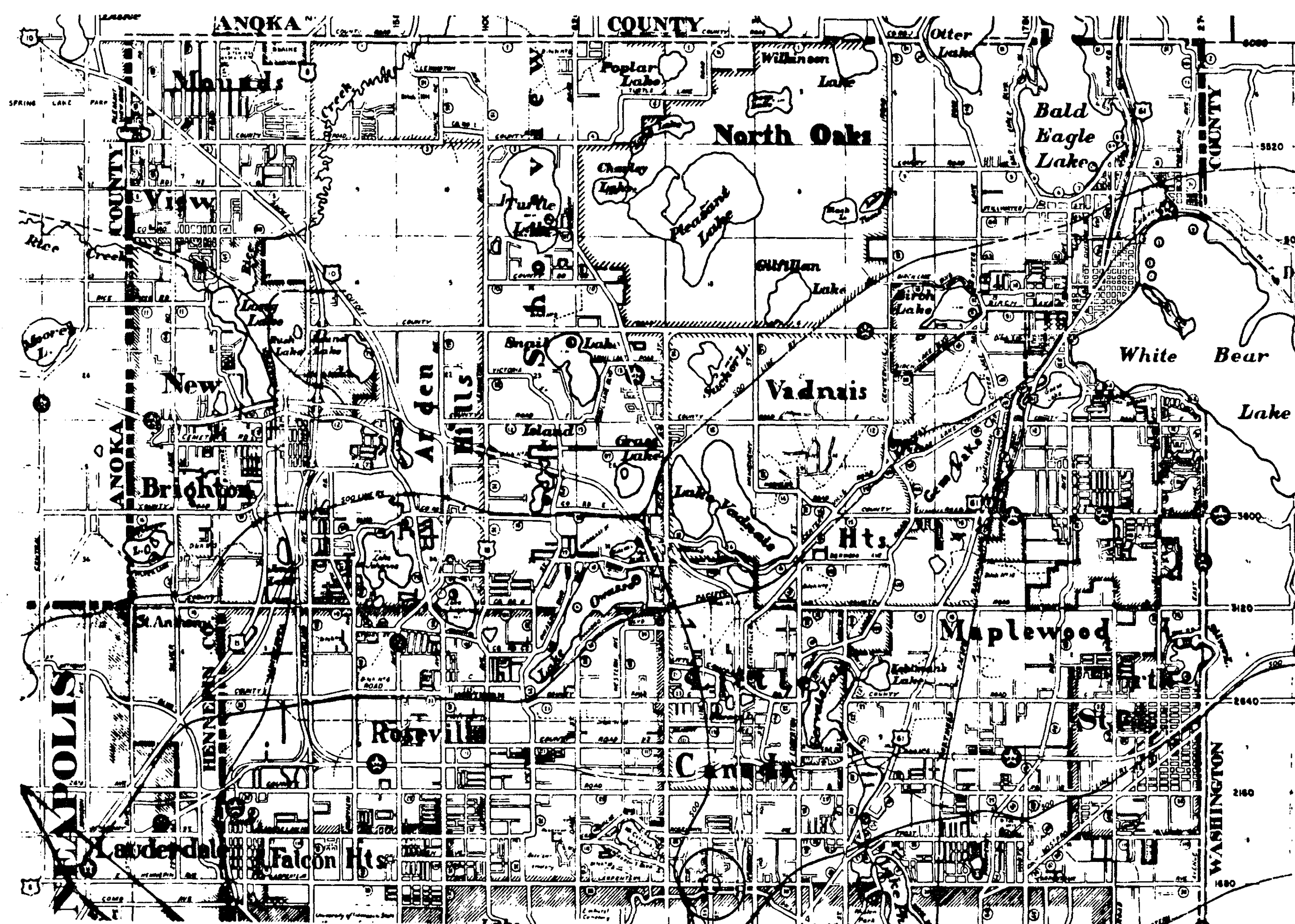
THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JANUARY 1, 1968 AS AMENDED BY SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 1969 SHALL GOVERN.

OFFICE OF COUNTY ENGINEER

RAMSEY COUNTY

PLAN OF TRAFFIC CONTROL SYSTEM FOR THE INTERSECTION OF

LARPENTEUR AVE. & JACKSON ST.



CITY OF ST. PAUL

CO. PROJ. NO. 69-30-S

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-4	DETAILS
5	INTERSECTION LAYOUT
6	FIELD WIRING DIAGRAM

RECOMMENDED FOR APPROVAL	DATE 9/23/69
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RECOMMENDED FOR APPROVAL	DATE
RECOMMENDED FOR APPROVAL	DATE
APPROVED	DATE

DESIGNED BY Wm V. Chenoweth DATE 9/23/69
DIRECTOR OF SAFETY

RECOMMENDED FOR APPROVAL Dean R. Goble DATE 10/6/69
COUNTY ENGINEER
APPROVED Thomas R. Payne DATE 10-6-69
CHAIRMAN OF THE RAMSEY COUNTY BOARD

MINNESOTA STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL _____ DATE _____
RECOMMENDED FOR APPROVAL _____ DATE _____
APPROVAL _____ DATE _____
STATE AID ENGINEER

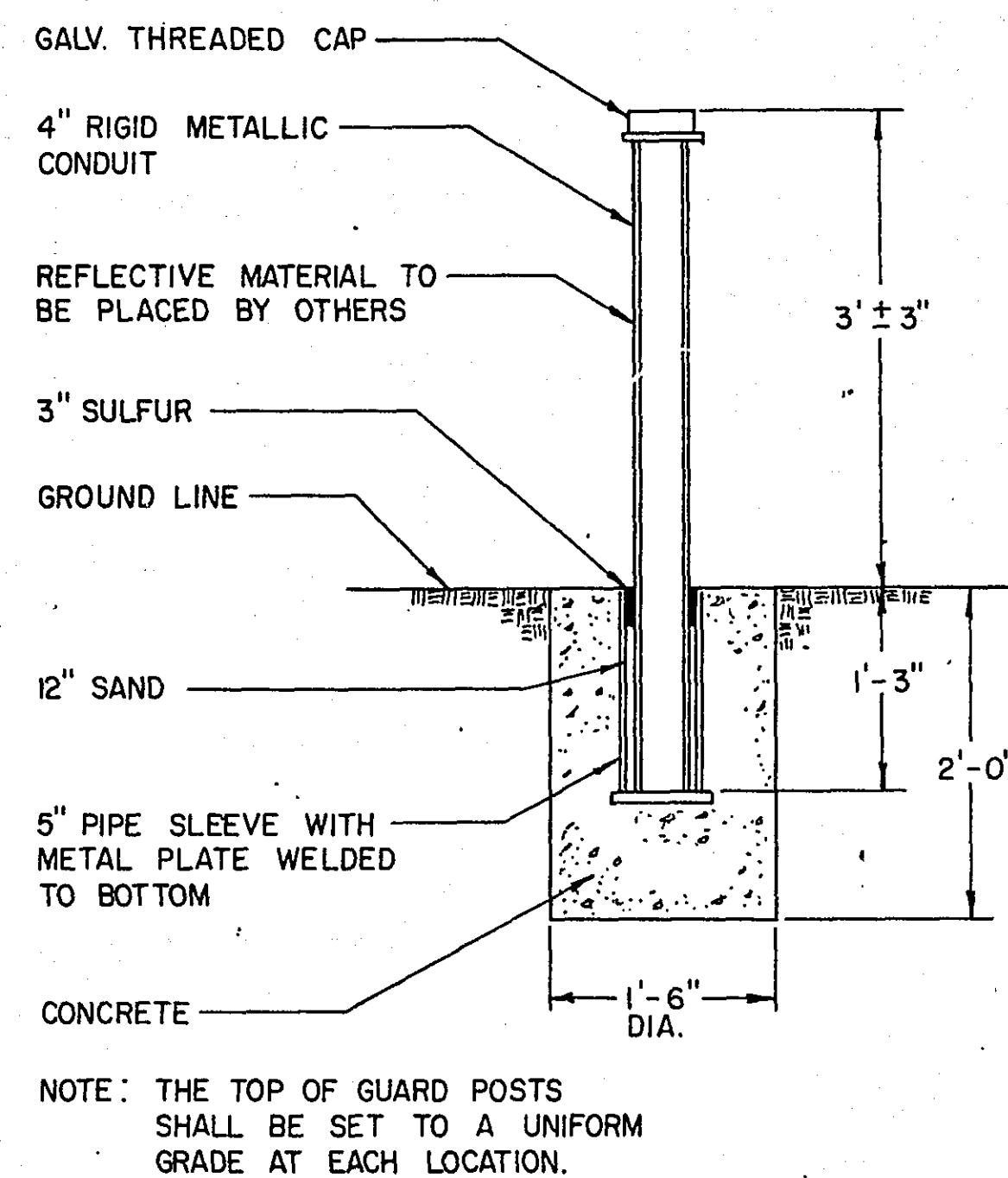
CO. PROJ. NO. 69-30-S

Sheet No. 1 of 6 Sheets

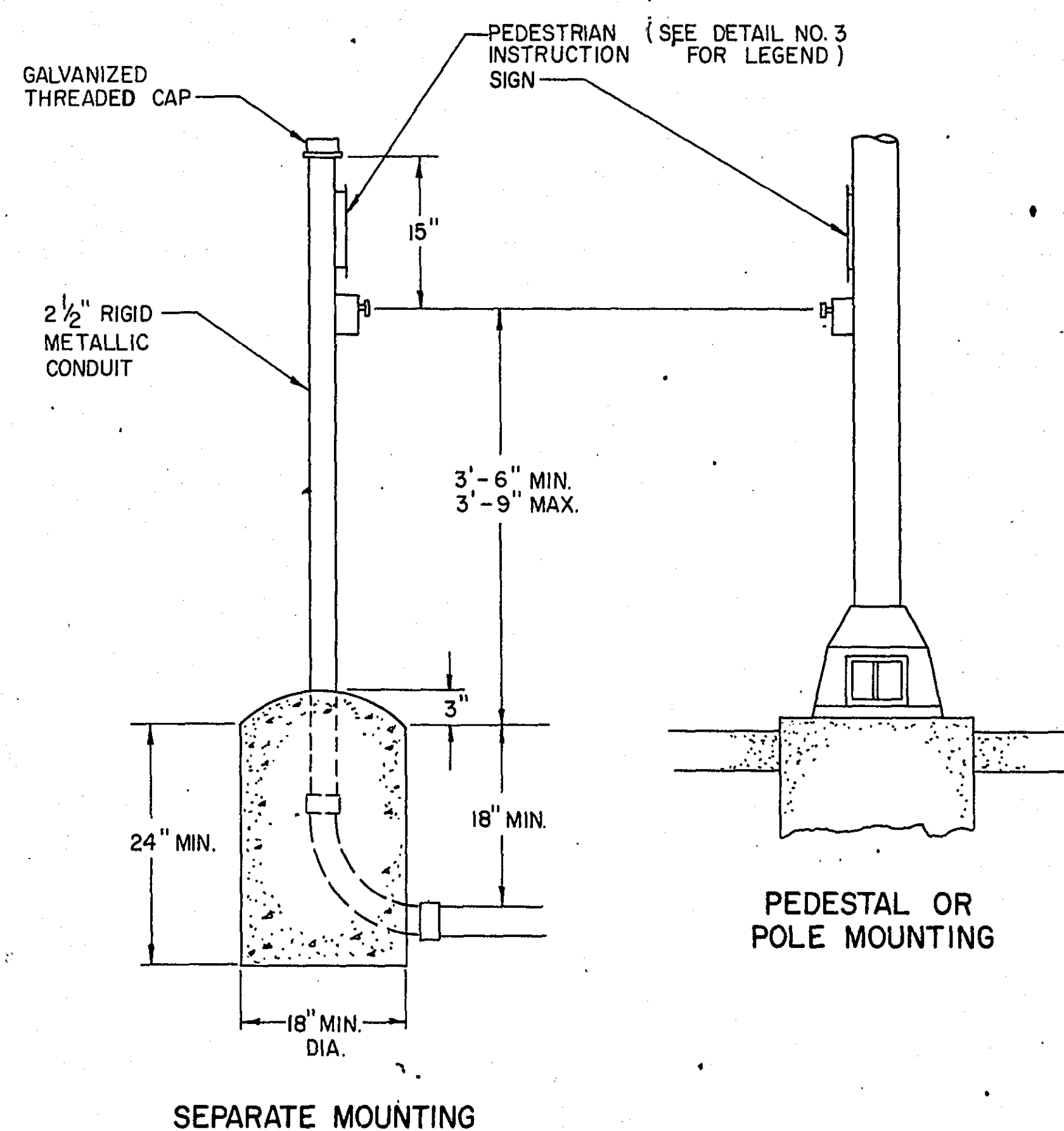
MINNESOTA
STATE HIGHWAY DEPARTMENT

17-110

GUARD POST

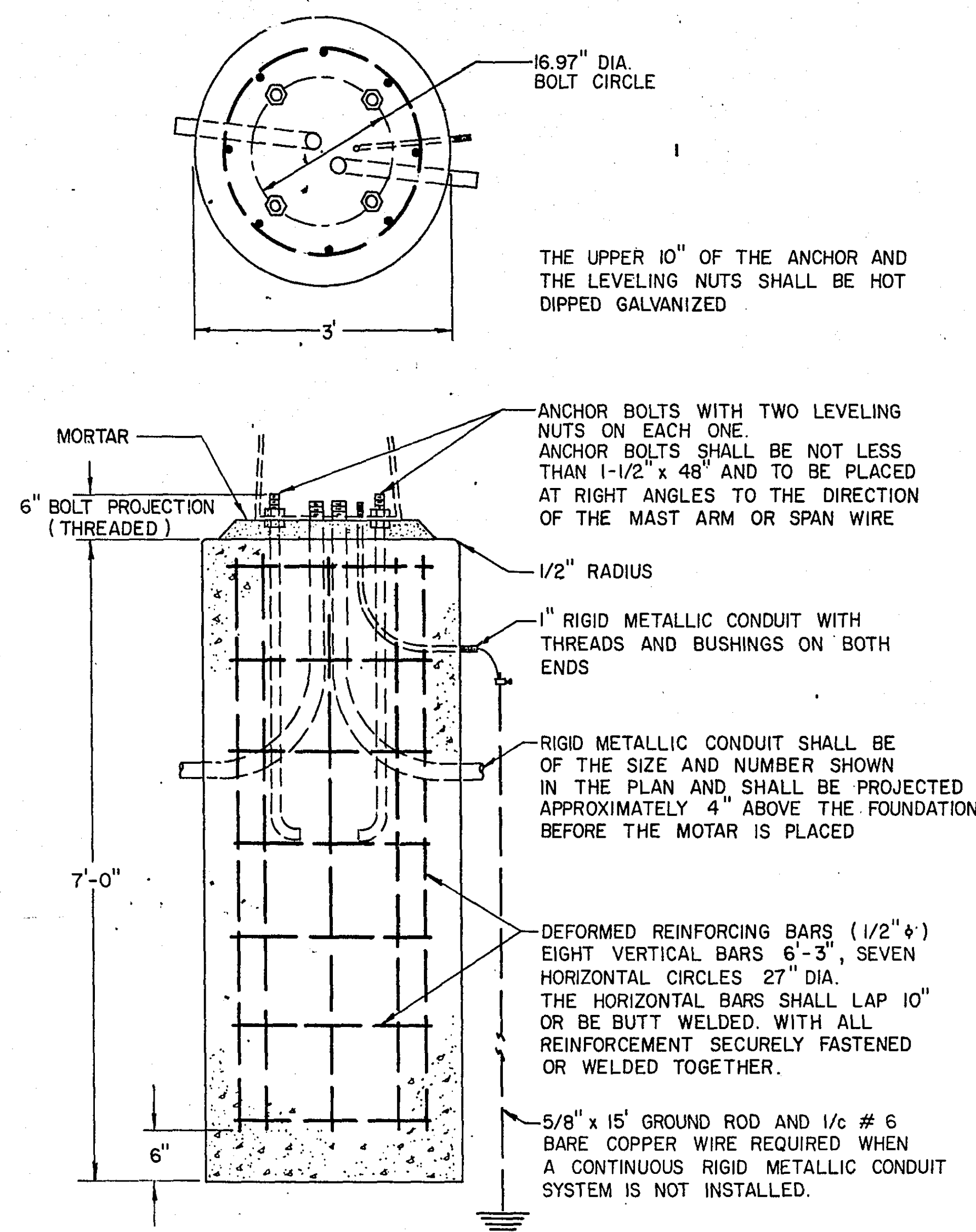


PEDESTRIAN PUSH BUTTON DETAIL NO. 1

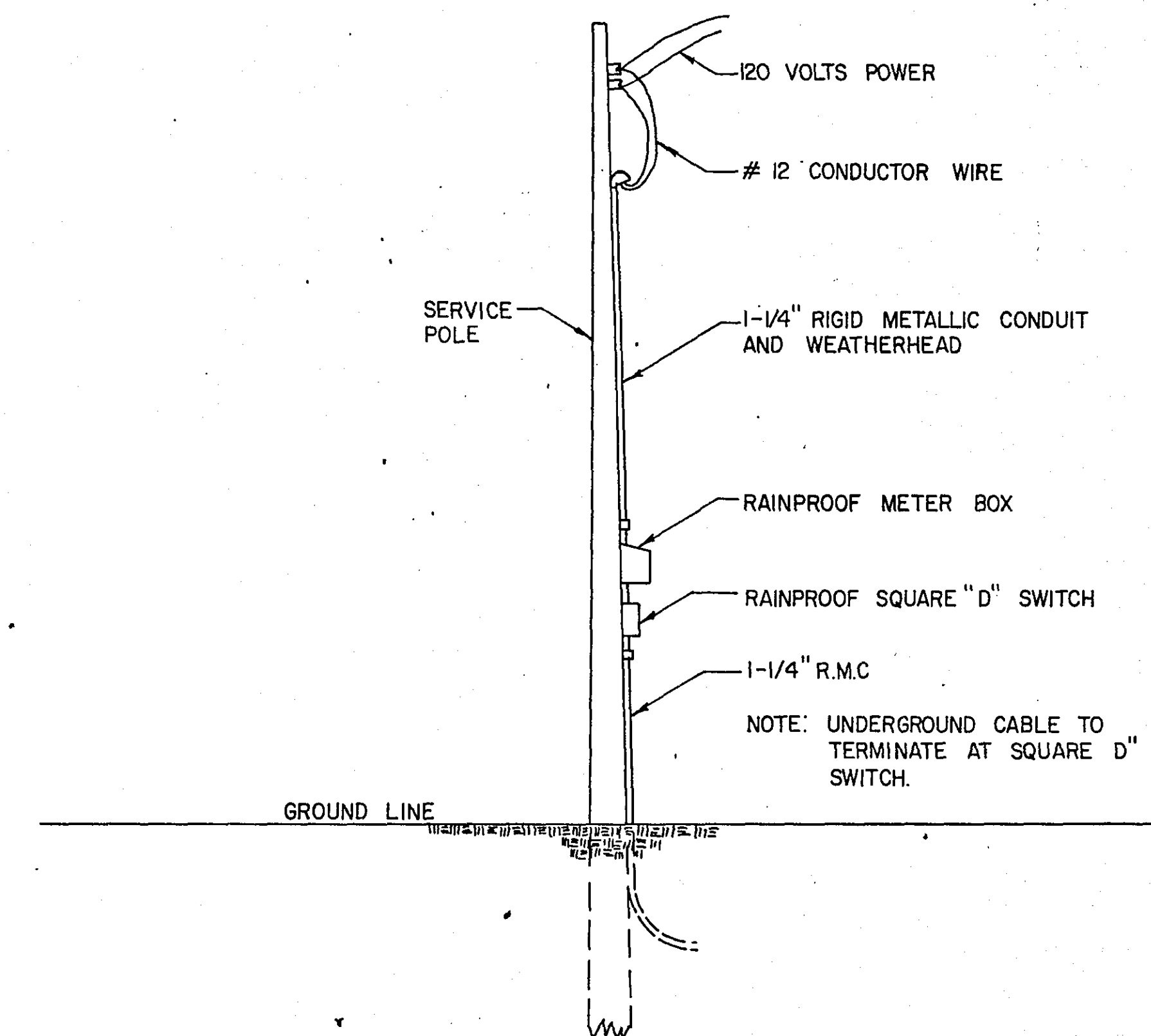


CONCRETE FOUNDATION

FOR MAST ARM TRAFFIC SIGNAL POLE

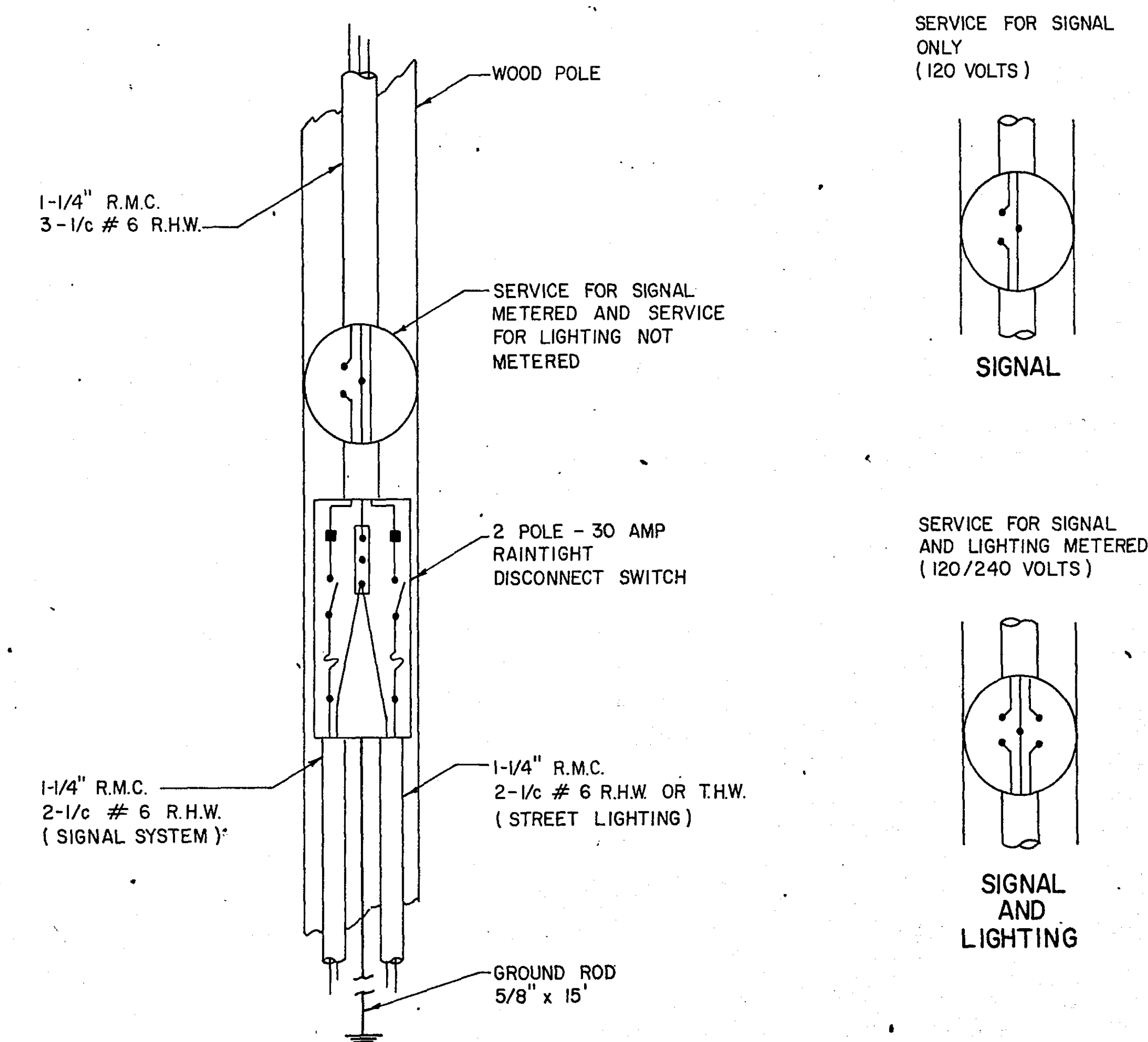
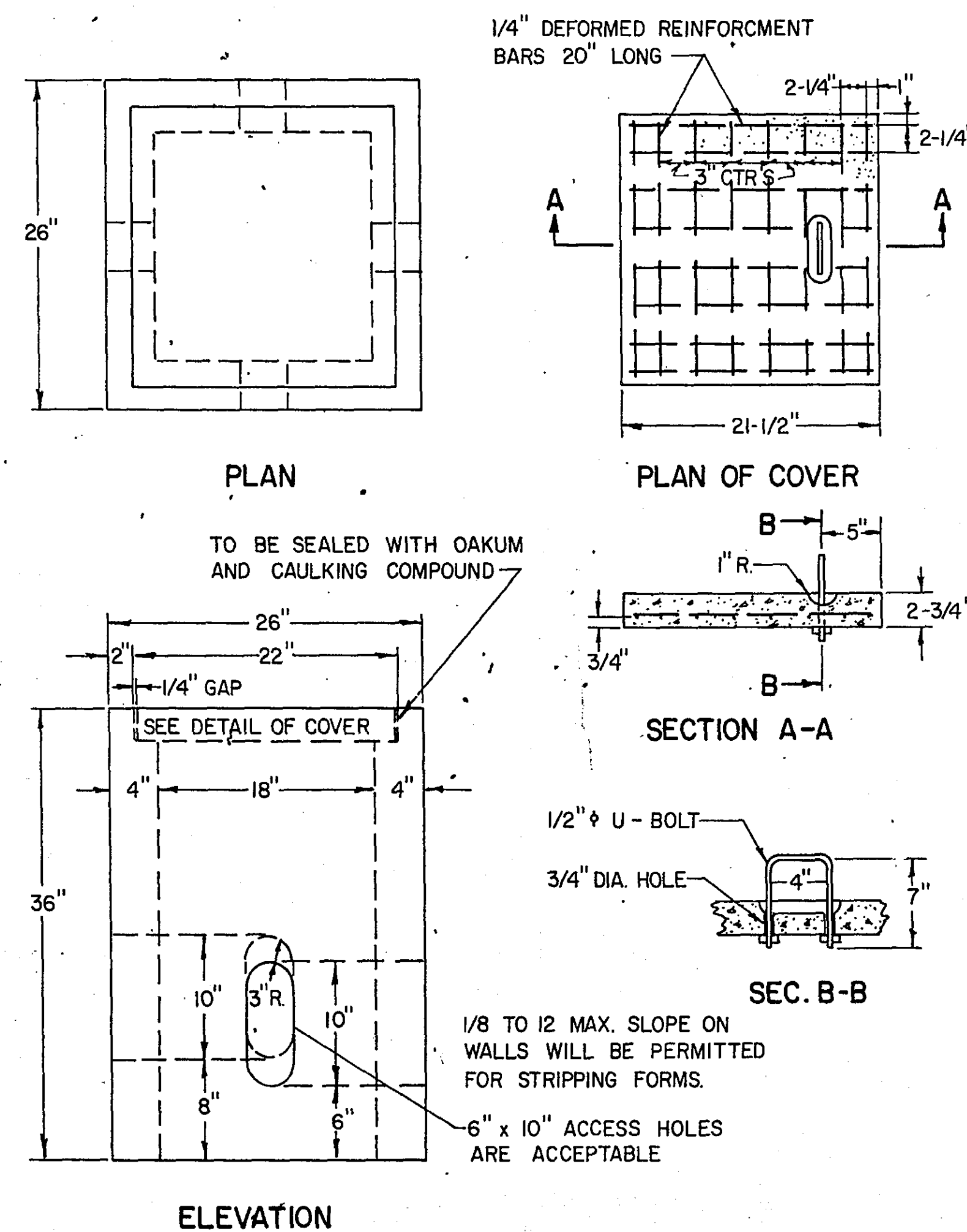
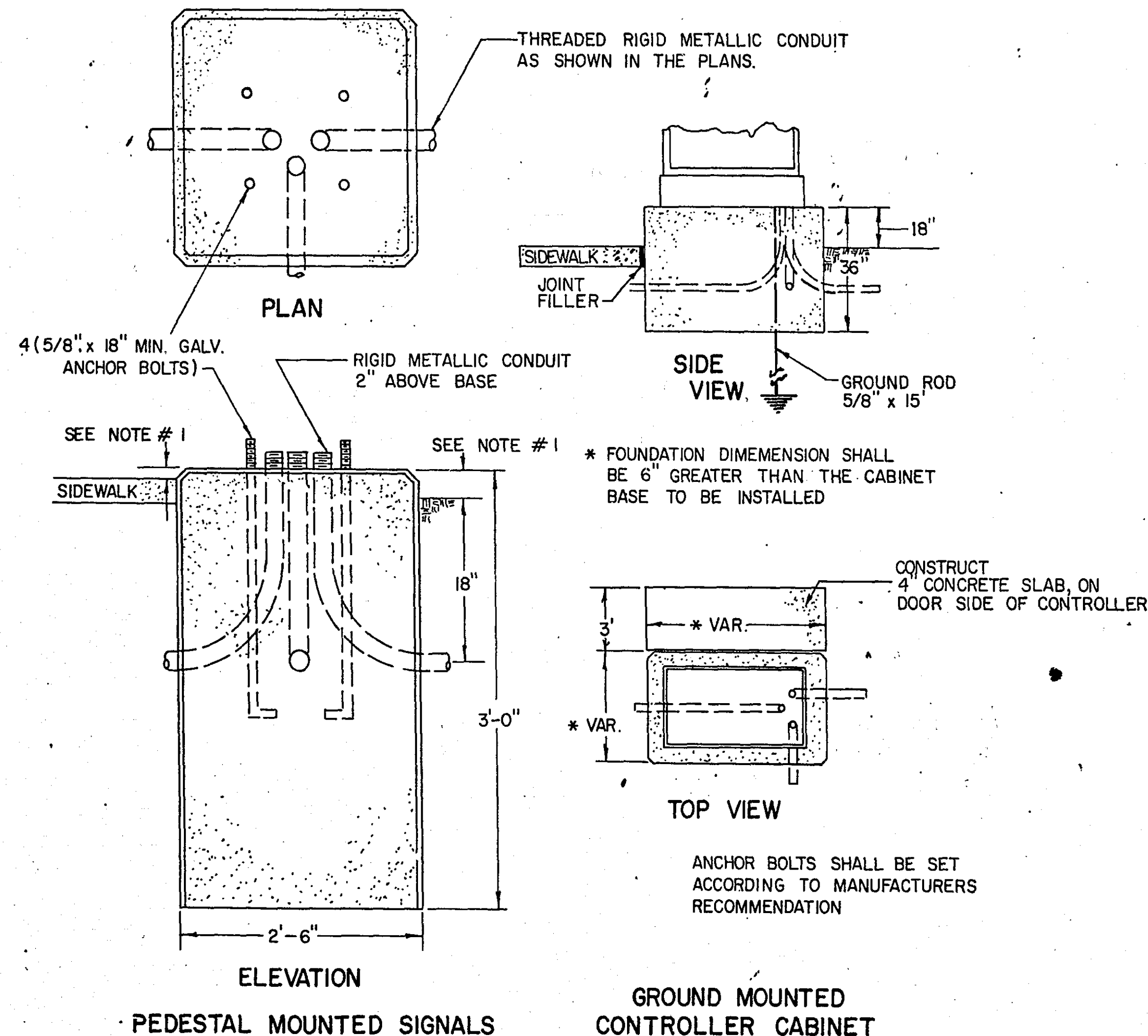


POLE FOR POWER CONNECTION



NOTE # 1

DISTANCE FROM GROUND LINE VARIABLE FROM 1/4" IN THE SIDEWALK AREA TO 2" IN THE SHOULDER OR BLVD. AREA.



CONCRETE FOUNDATIONS

PRECAST CONCRETE HANDHOLE OR PULLBOX

CO. PROJ. NO. 69-30-S

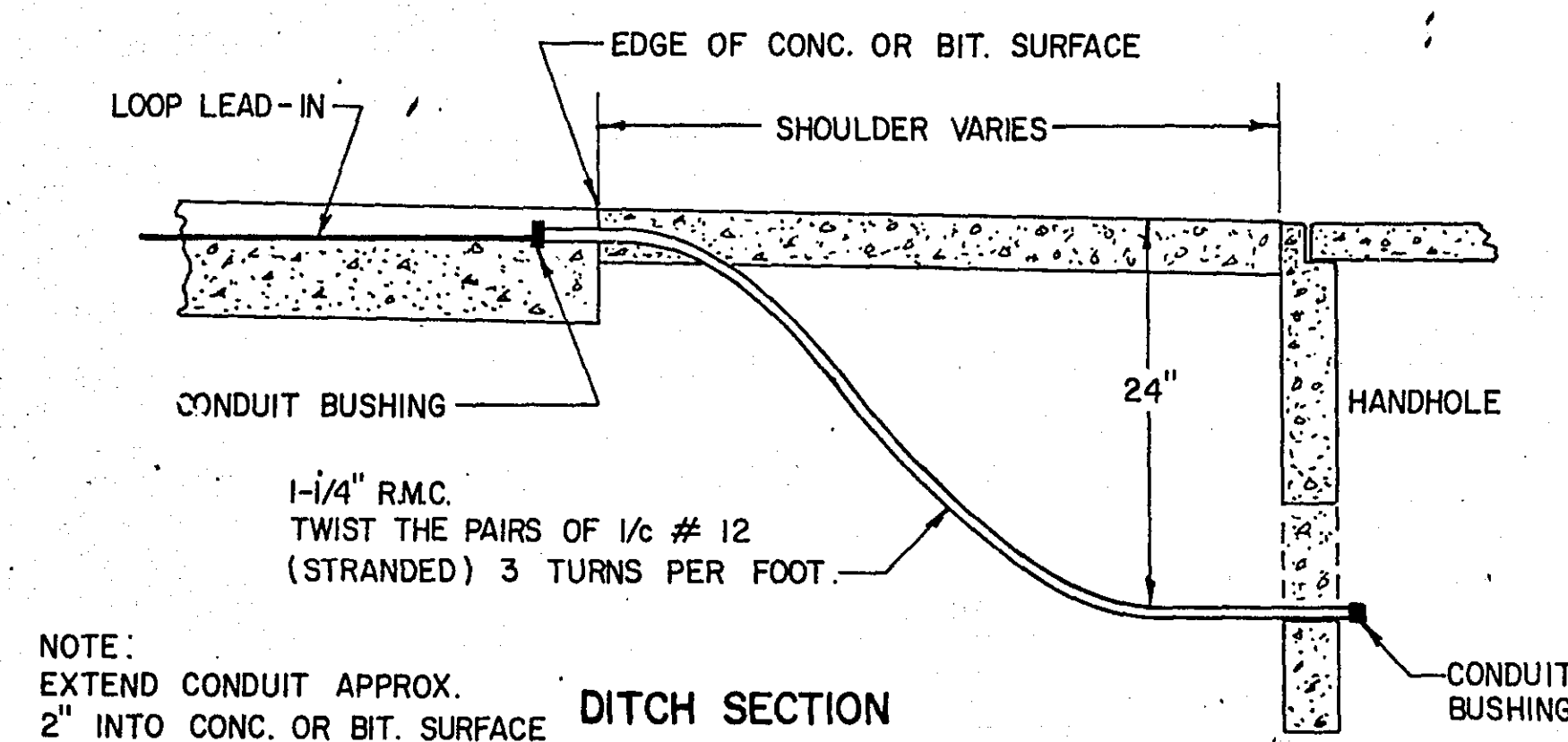
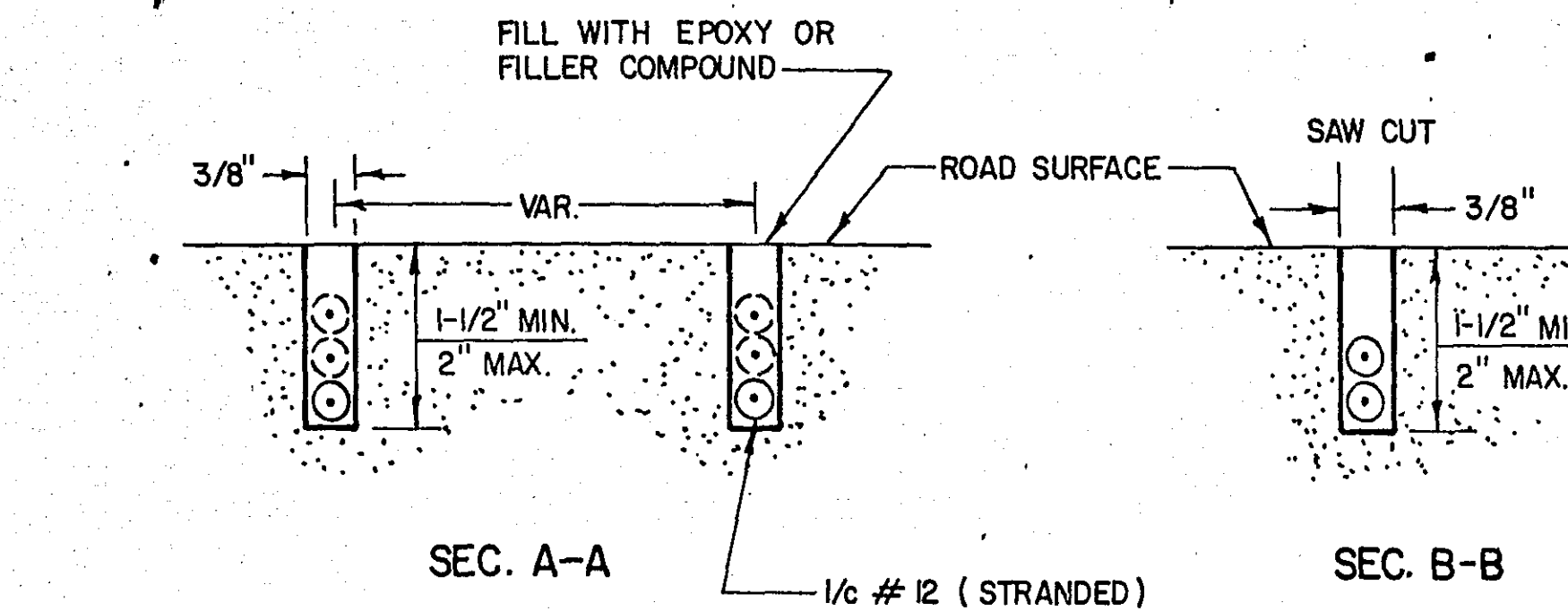
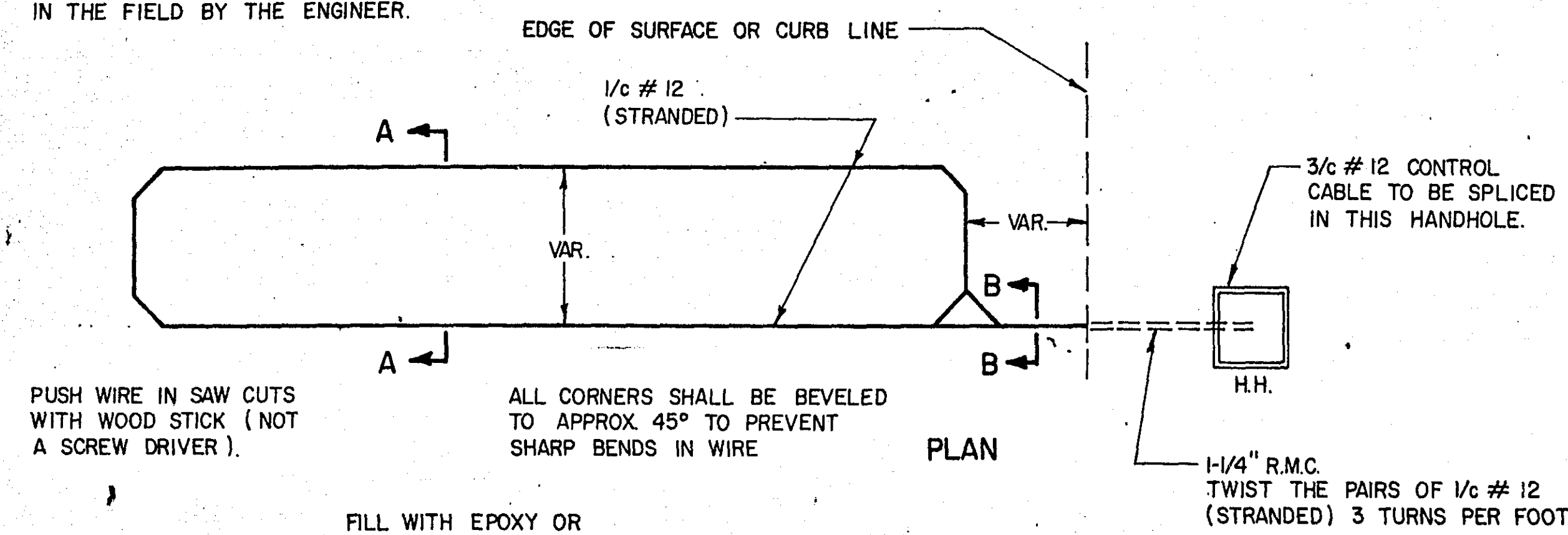
SHEET NO. 2 OF 6 SHEETS

MICROFILMED
RAMSEY CO. ENGR.

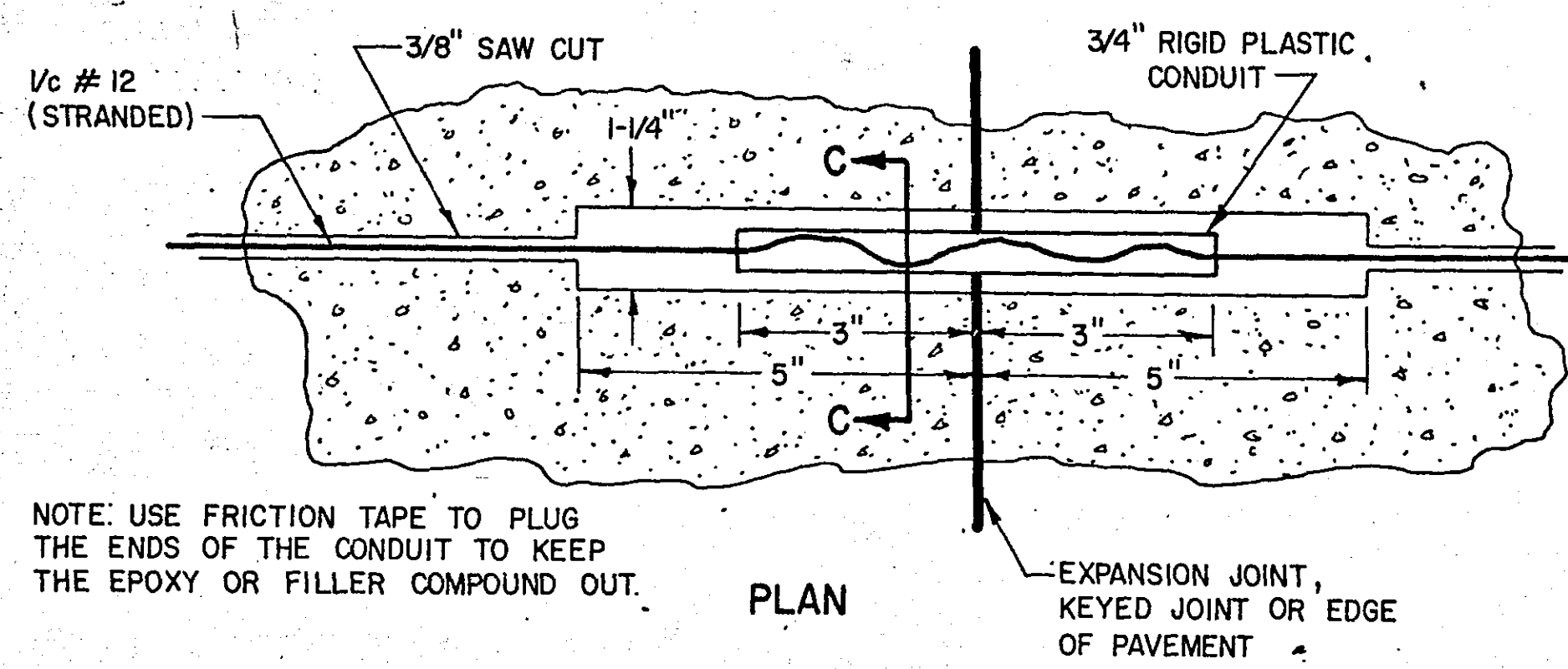
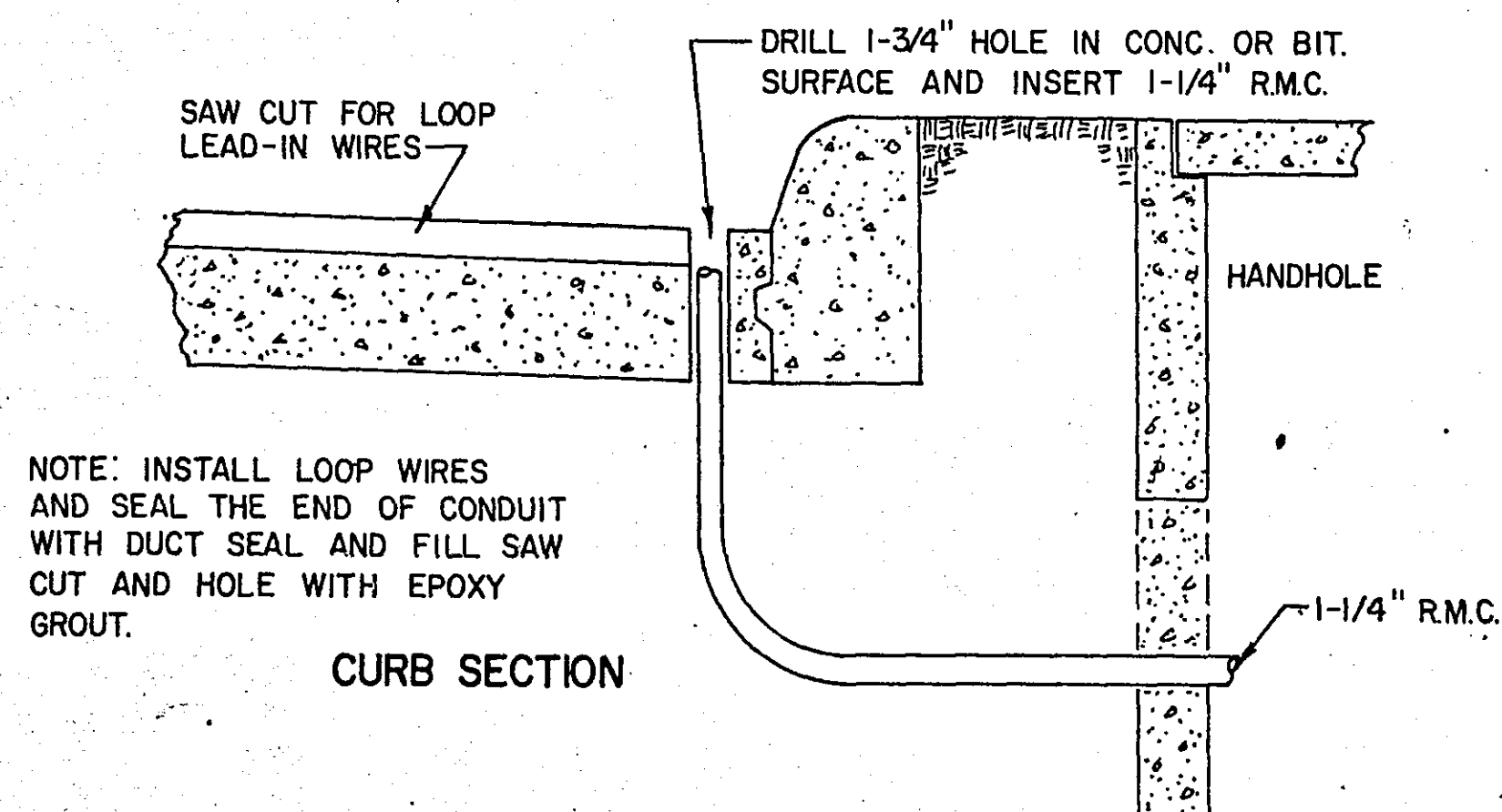
17-110

LOOP DETECTION INSTALLATION DETAIL NO. 2

NOTE: NUMBER OF TURNS &
SIZE OF LOOP SHALL BE DETERMINED
IN THE FIELD BY THE ENGINEER.

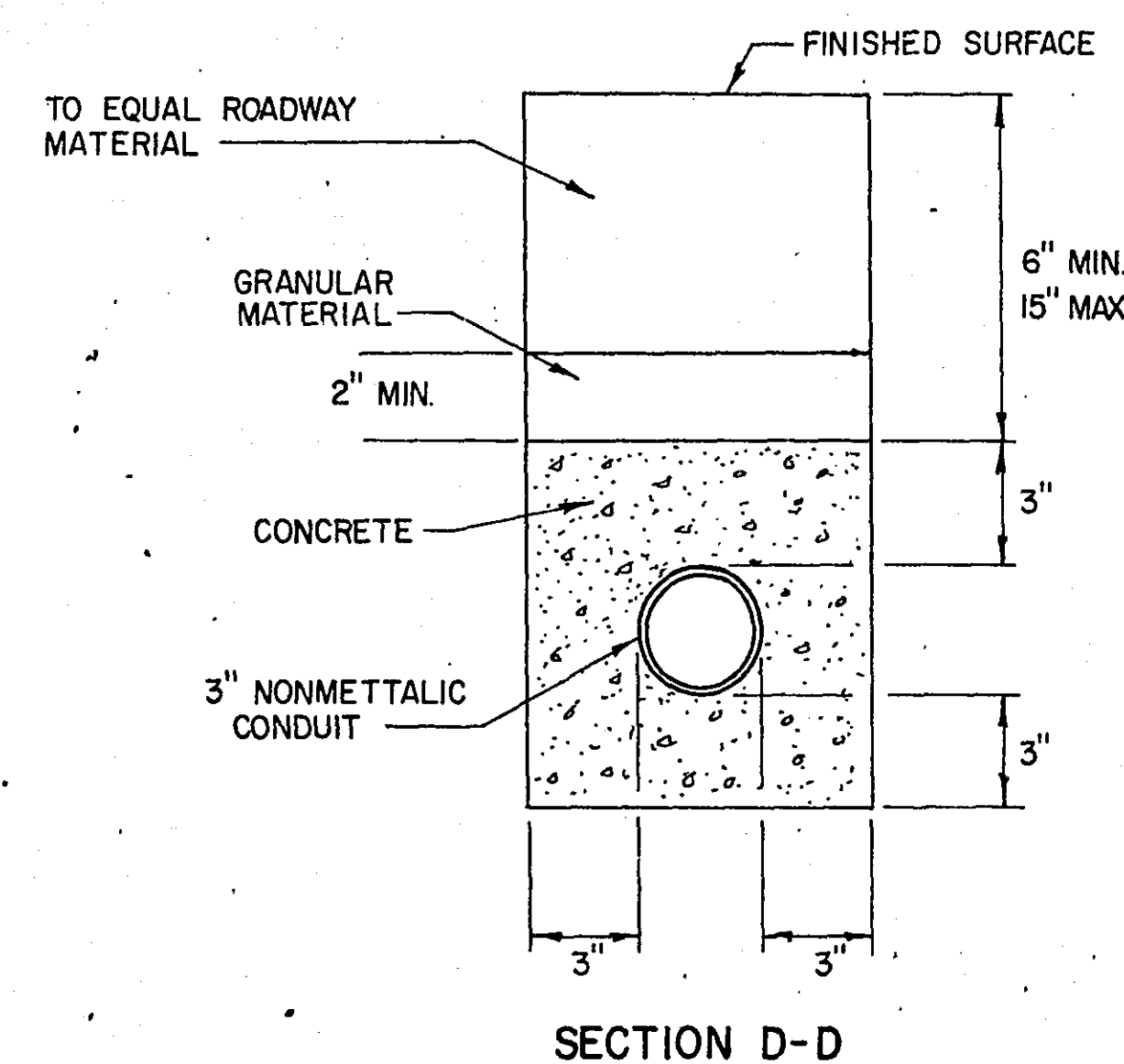
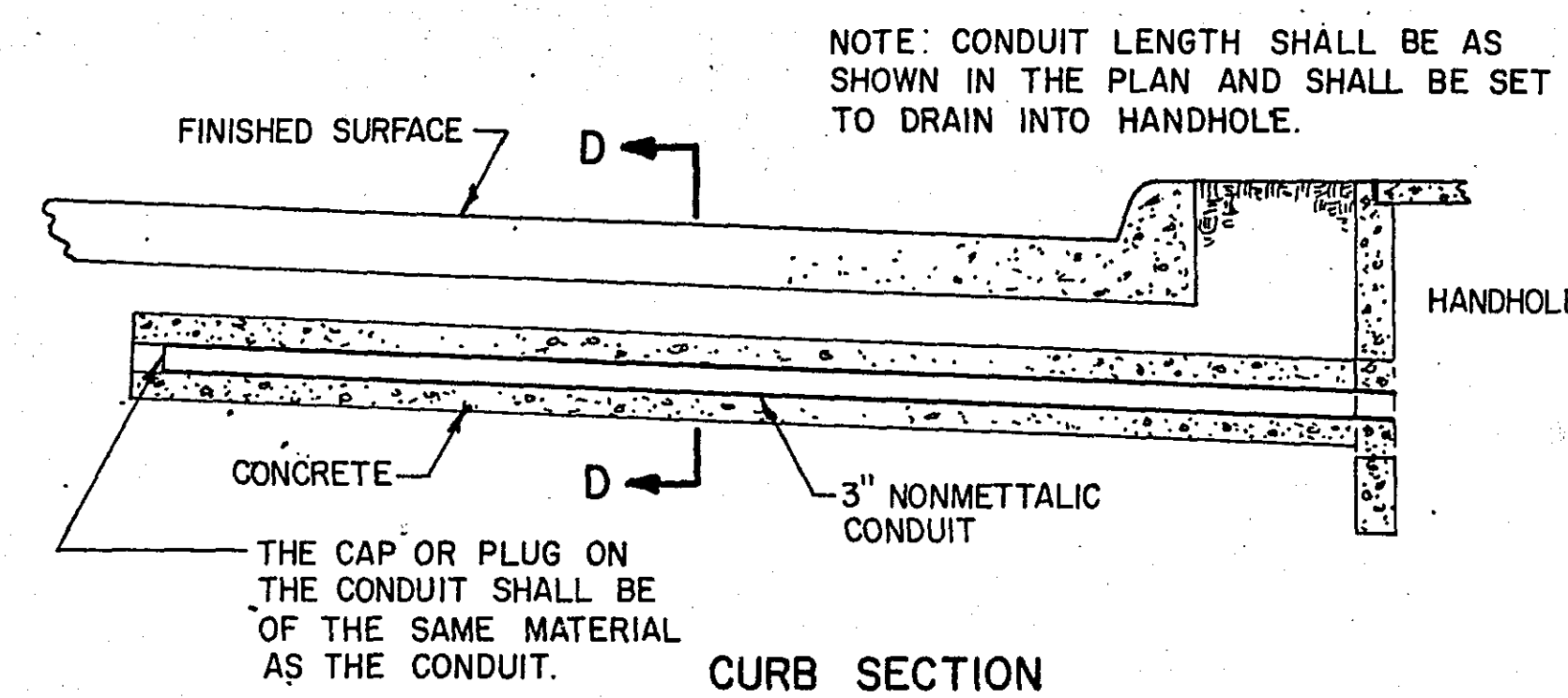


NOTE:
EXTEND CONDUIT APPROX.
2" INTO CONC. OR BIT. SURFACE

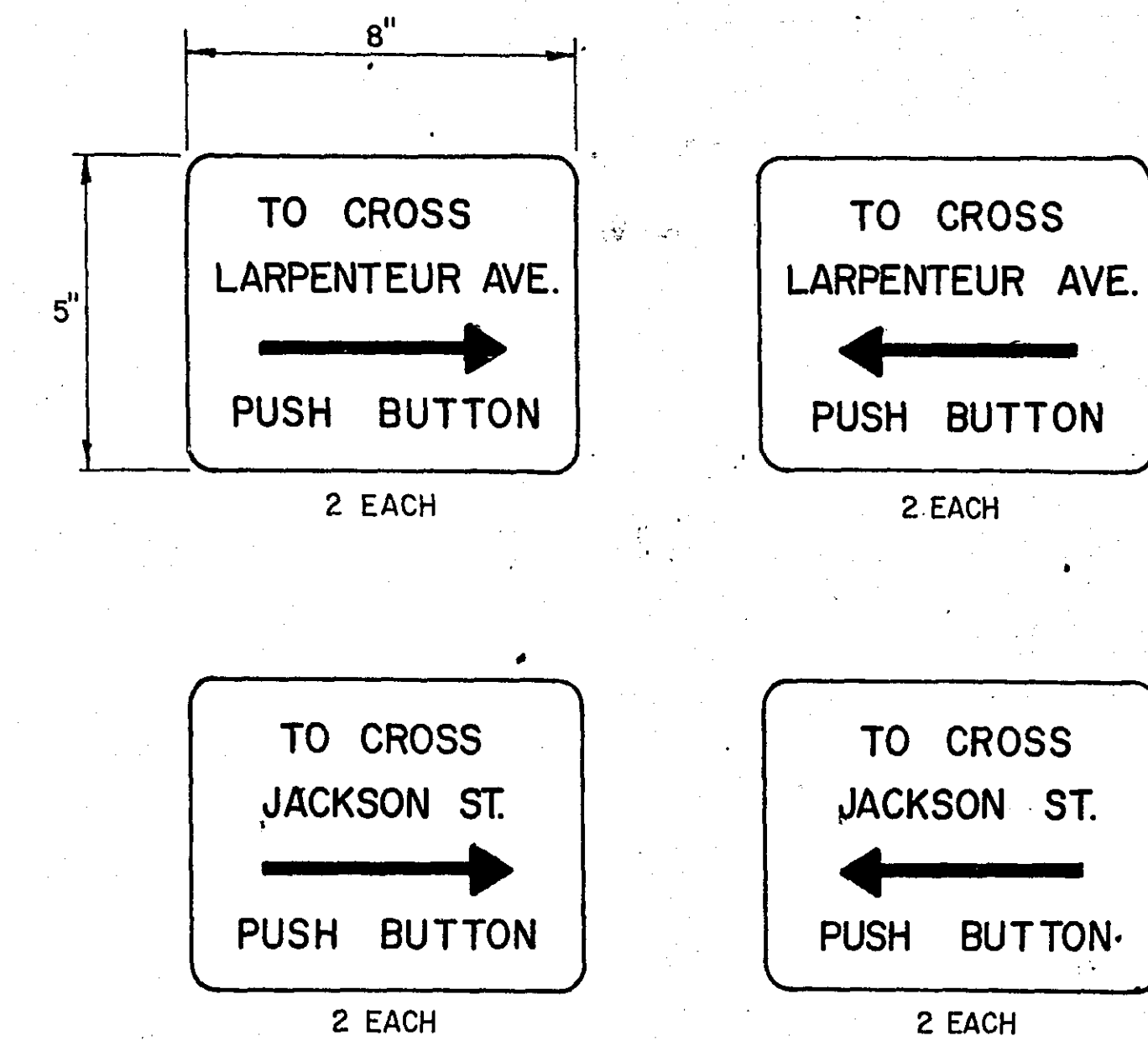


JOINT SLEEVE INSTALLATION
FOR LOOP DETECTORS

MAGNETIC VEHICLE DETECTOR INSTALLATION DETAIL NO. 4



PEDESTRIAN INSTRUCTION SIGNS DETAIL NO. 3



ABBREVIATIONS

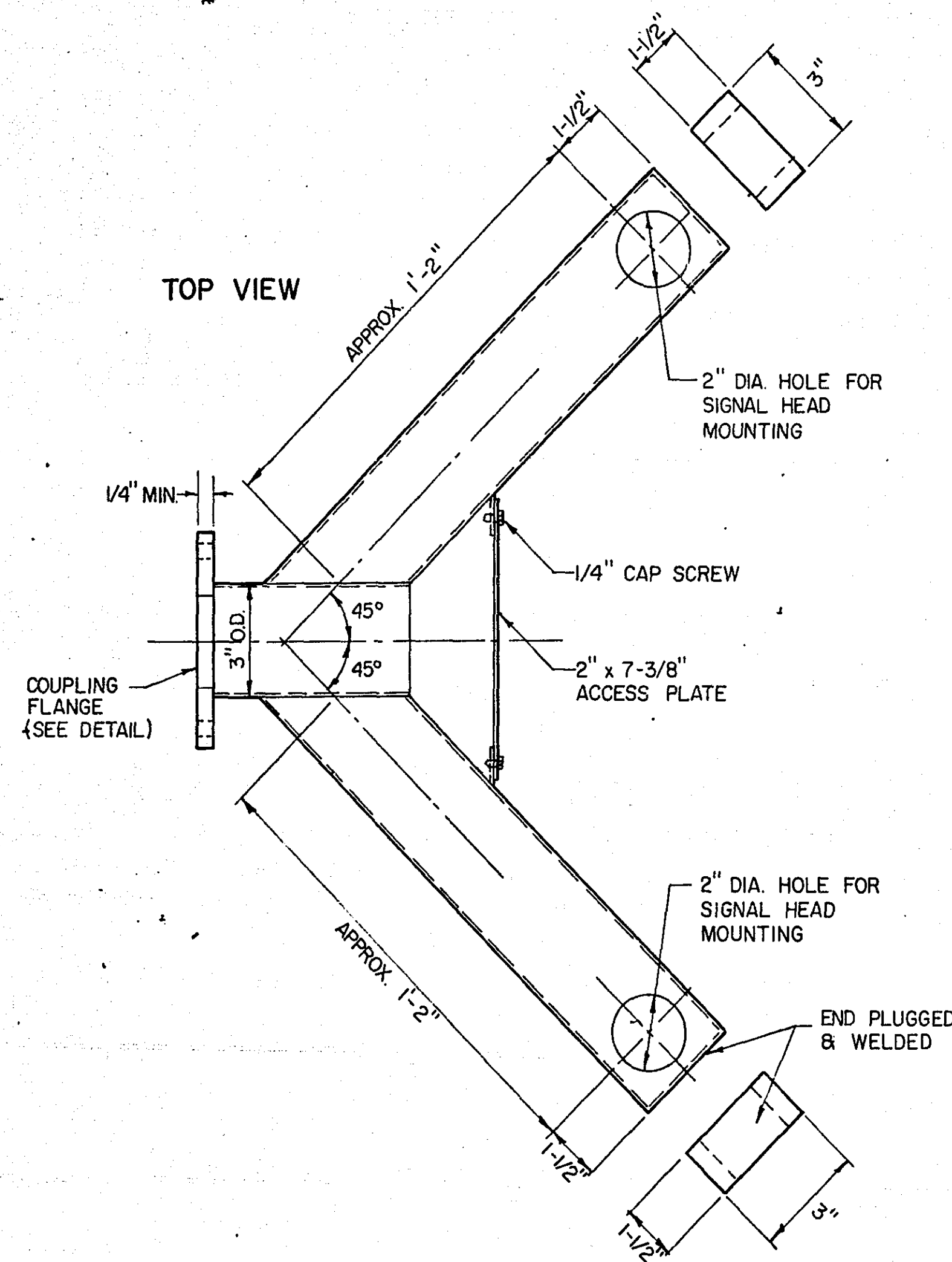
EQUIPMENT & INDICATIONS

RED - RED
YEL - YELLOW
GRN - GREEN
LTA - LEFT TURN ARROW
THA - THRU ARROW
RTA - RIGHT TURN ARROW
TRA - THRU AND RIGHT ARROW
WLK - WALK
NEU - NEUTRAL
DWK - DON'T WALK
SW - SWITCH
LUM - LUMINAIRE
PA1(eg) - PEDESTRIAN INDICATION - "A" PHASE
PBB2(eg) - PUSH BUTTON - "B" PHASE
C3(eg) - SIGNAL HEAD - "C" PHASE
DA4(eg) - DETECTOR - "A" PHASE
H.H. - HANDHOLE
GRR - GROUND ROD
SERV. - SERVICE

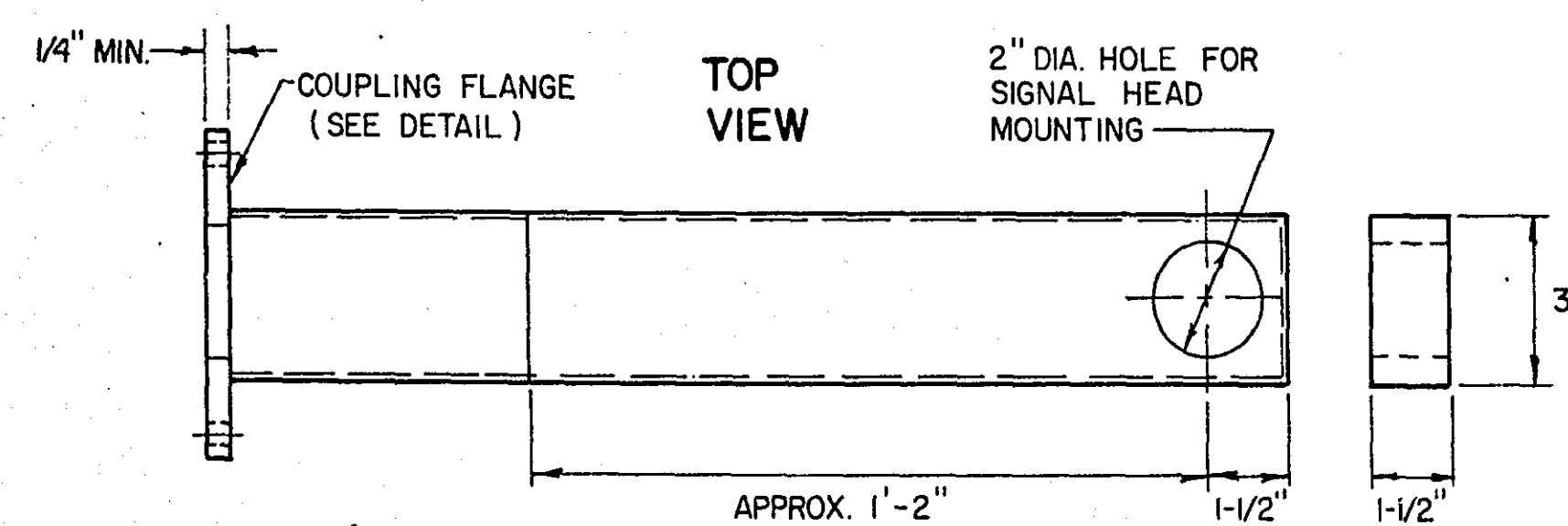
DNL - DOWNLIGHT
PEC - PHOTOELECTRIC CELL
ST LHT. - STREET LIGHT
CH - CHECK
S.O.P. - SOURCE OF POWER
EQ.G. - EQUIPMENT GROUND
SPR - SPARE CONDUCTOR

COLOR CODING OF CONDUCTORS

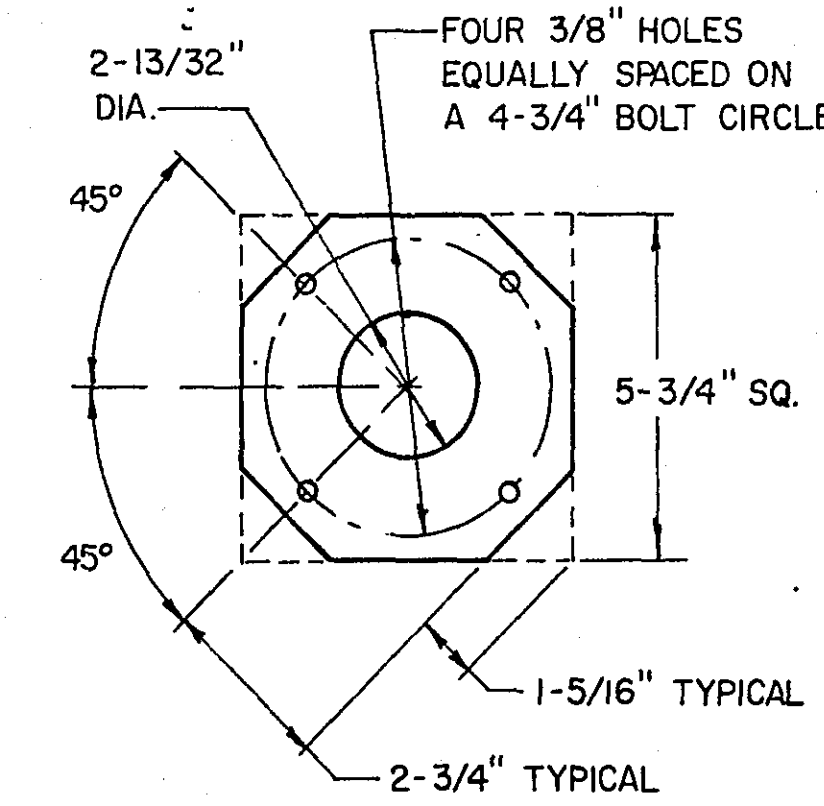
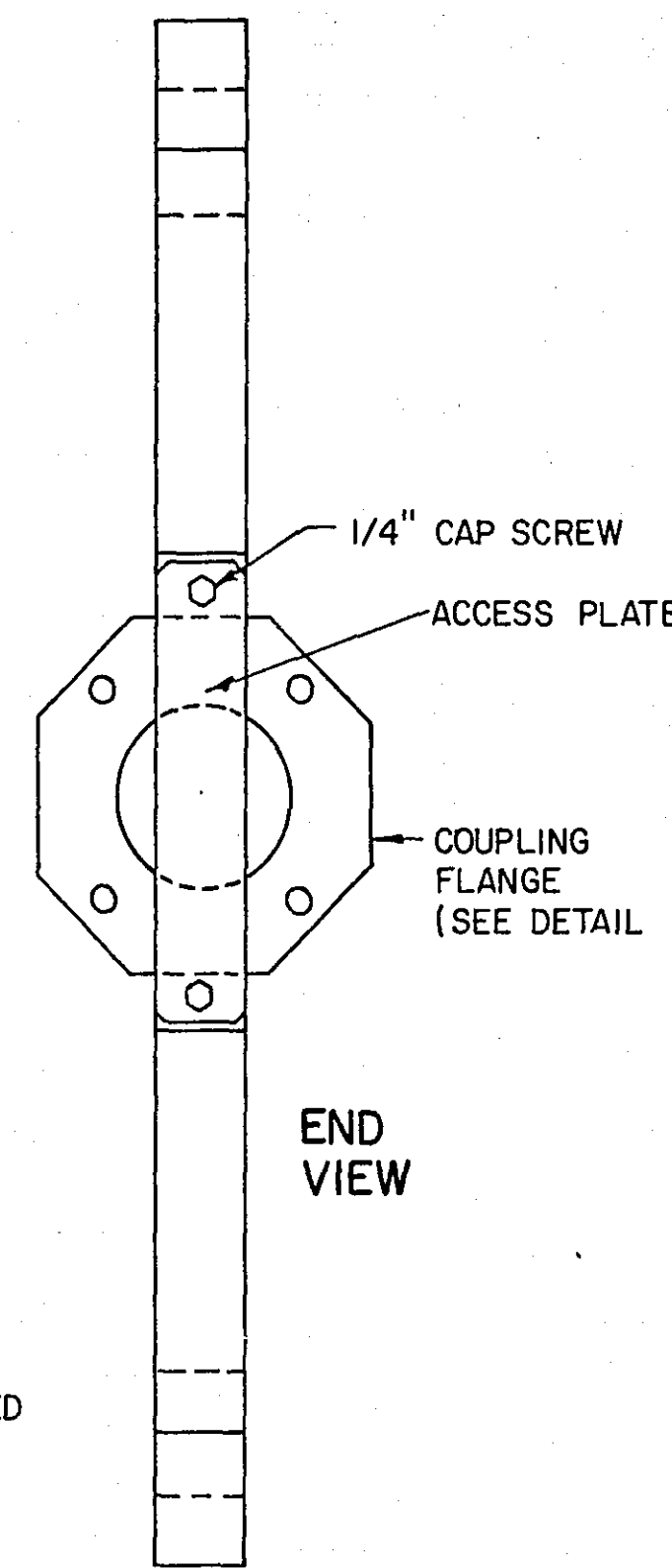
R - RED
O - ORANGE
BL - BLUE
WH - WHITE
R/BLK - RED WITH BLACK TRACER
O/BLK - ORANGE WITH BLACK TRACER
BL/BLK - BLUE WITH BLACK TRACER
WH/BLK - WHITE WITH BLACK TRACER
BLK - BLACK
BLK/WH - BLACK WITH WHITE TRACER
G/BLK - GREEN WITH BLACK TRACER
G - GREEN



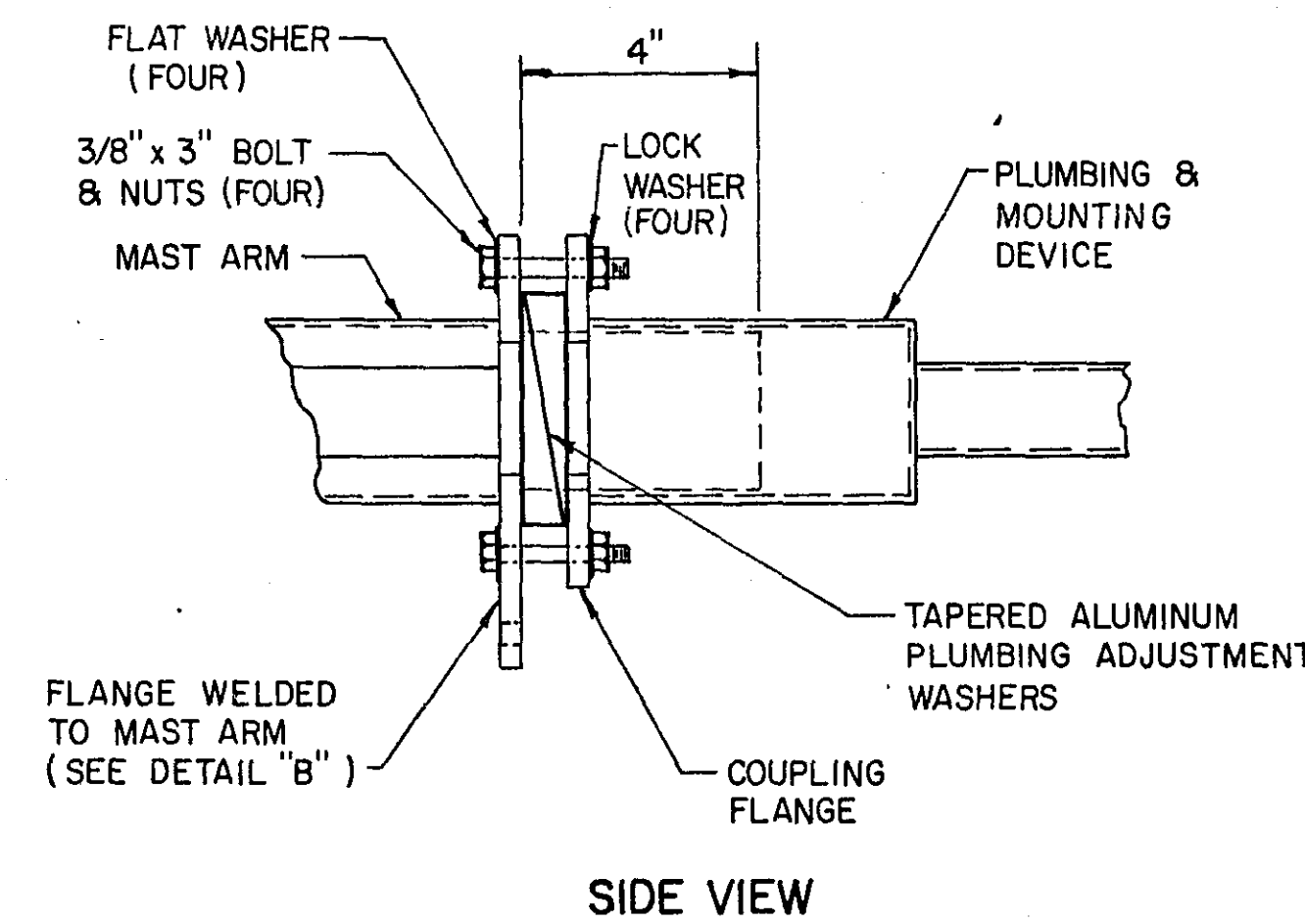
**TWO-WAY TRAFFIC SIGNAL
PLUMBING AND MOUNTING DEVICE**
SPECIFICATION REFERENCE M.H.D. 1703



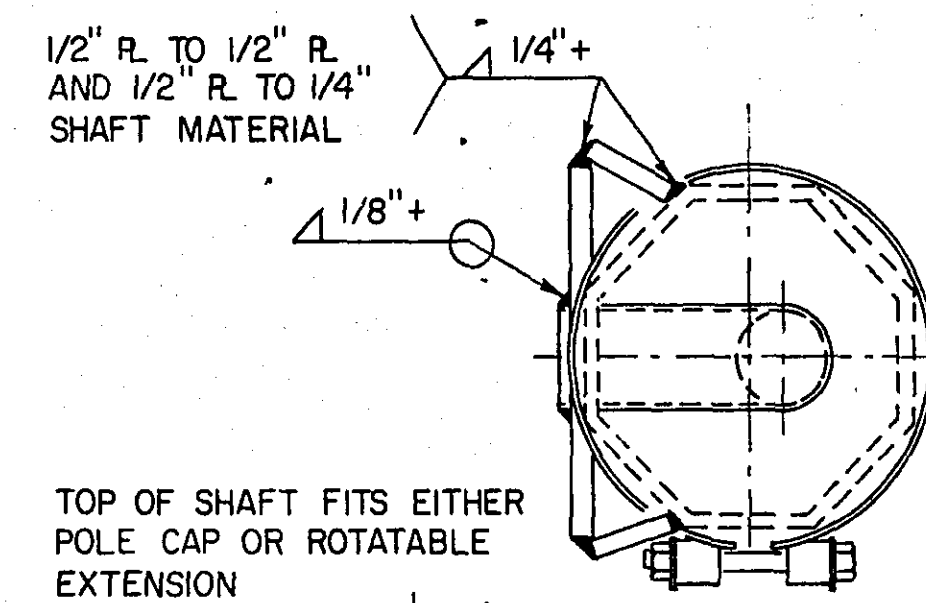
**ONE-WAY TRAFFIC SIGNAL
PLUMBING AND MOUNTING DEVICE**
SPECIFICATION REFERENCE M.H.D. 1703



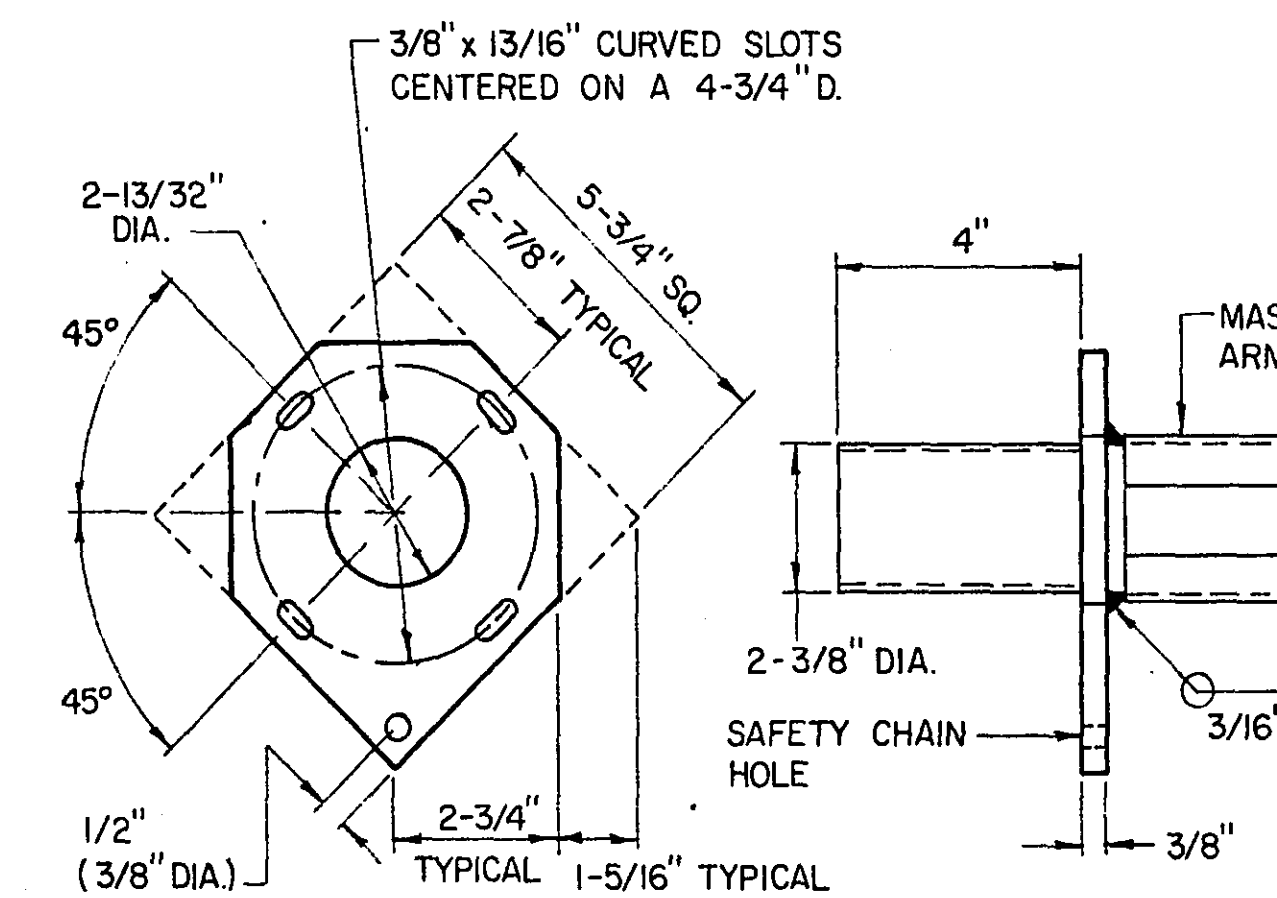
**COUPLING FLANGE
DETAIL**
(ONE-WAY AND TWO-WAY SIGNAL)



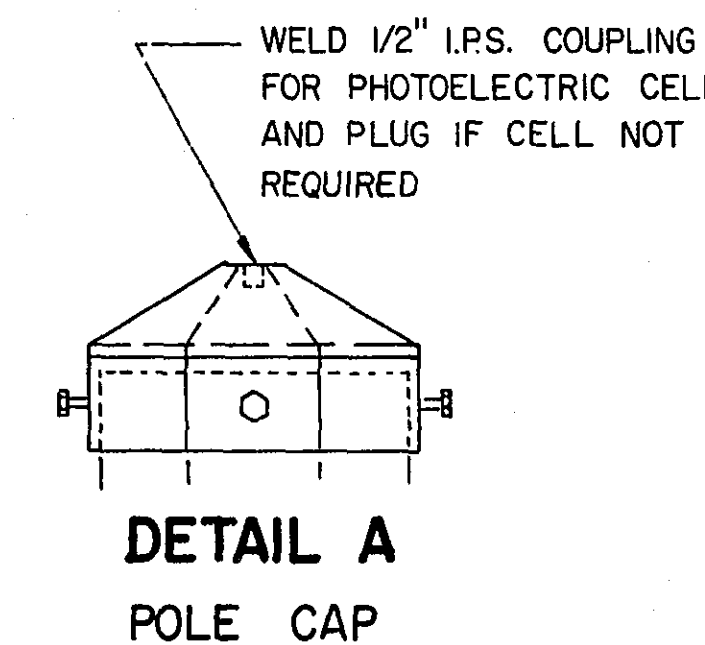
ASSEMBLY DETAIL
(ONE-WAY AND TWO-WAY SIGNAL)
SPECIFICATION REFERENCE M.H.D. 1703



DETAIL C
ROTATABLE LUMINAIRE
EXTENSION AND MAST
ARM CONNECTION

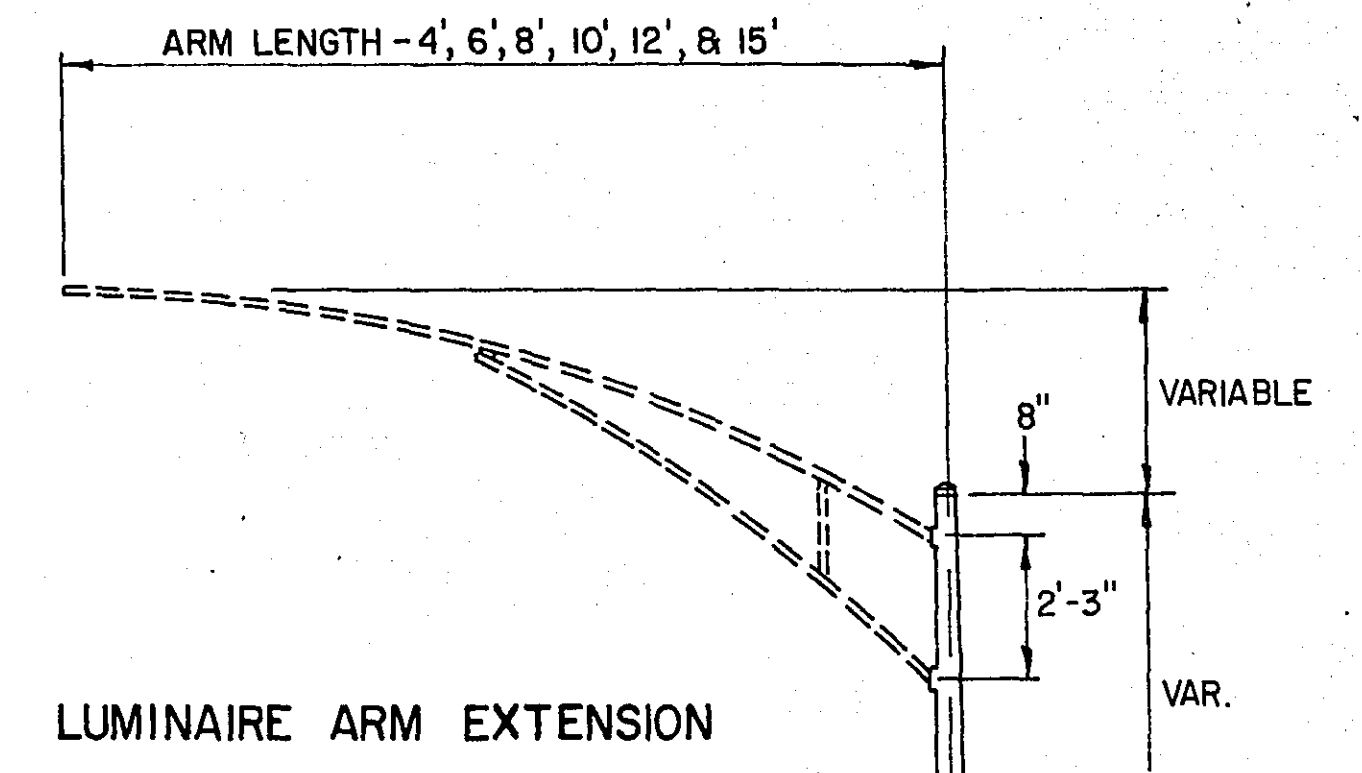


DETAIL B
FLANGE

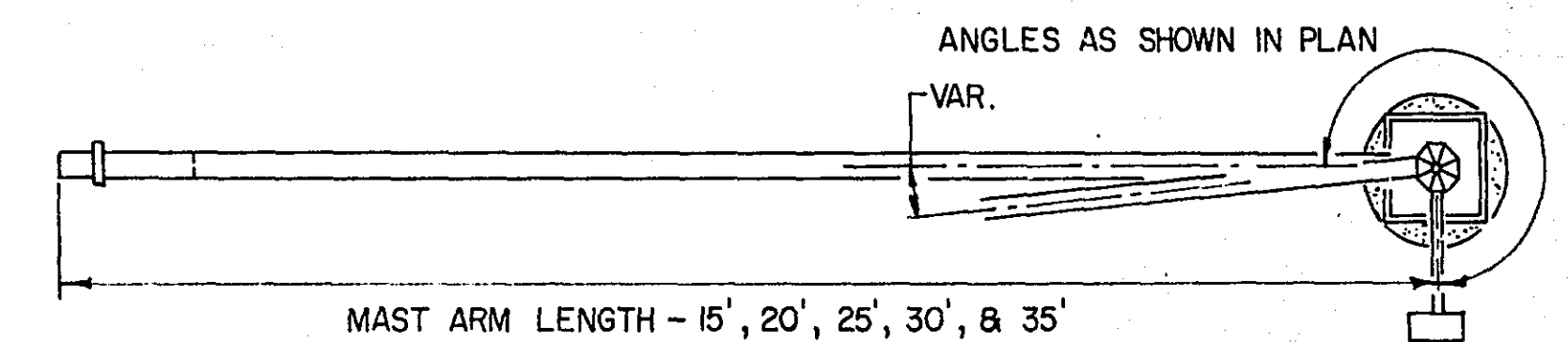


DETAIL A
POLE CAP

- NOTES:
- TYPE A-20-D30 OR 40-12 TYPE A-20-T30 OR 40-20
(1) (2) (3) (4) (1) (2) (3) (4)
1. LETTER TYPE INDICATES POLE MAST ARM POSITION WITH RESPECT TO THE $\angle$ OF ROADWAY.
 2. NUMBER FOLLOWING TYPE LETTER INDICATES SIGNAL MAST ARM LENGTH.
 3. SECOND LETTER INDICATES LUMINAIRE TRUSS - TYPE ARM EXTENSION OR DAVIT - TYPE ARM EXTENSION. SECOND LETTER FOLLOWED BY NUMBERS INDICATES LUMINAIRE MOUNTING HEIGHT.
 4. NUMBER FOLLOWING INDICATES LENGTH OF LUMINAIRE TRUSS ARM OR DAVIT ARM.



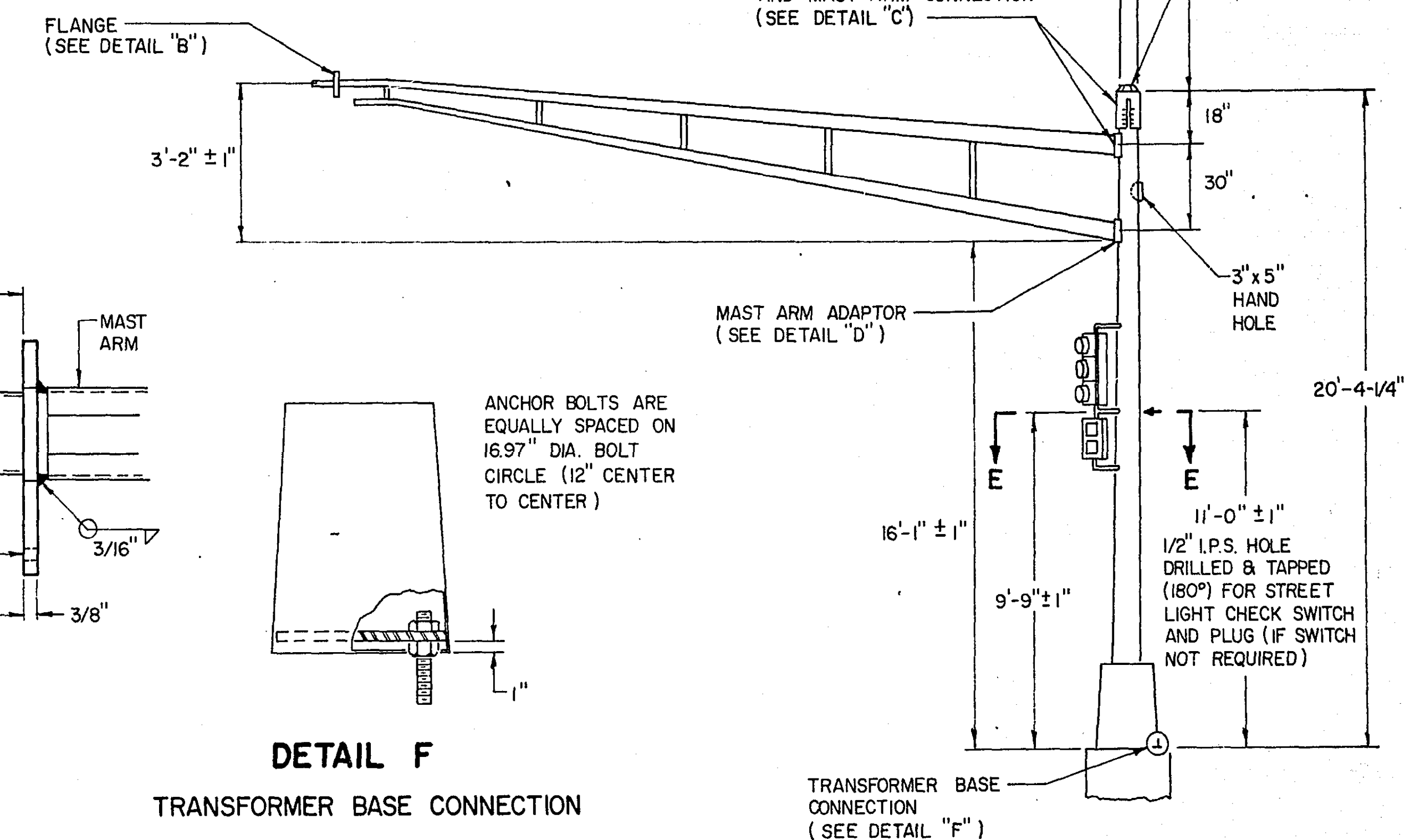
LUMINAIRE ARM EXTENSION



PLAN

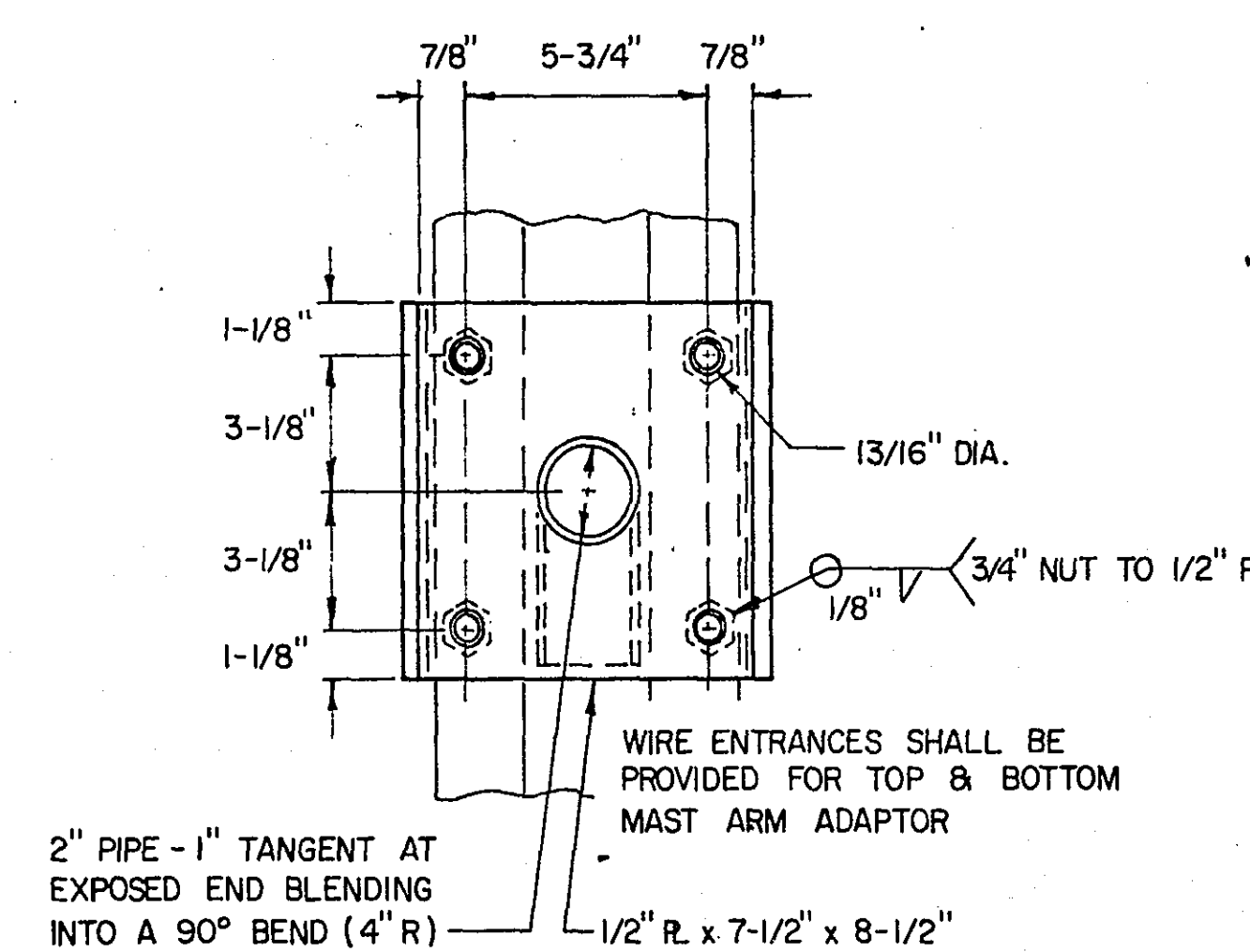
(1) DIMENSIONS SHOWN SHOULD PROVIDE FOR A DISTANCE OF 30' OR 40' FROM TRANSFORMER BASE BOTTOM TO TOP OF LUMINAIRE. DIMENSIONS MAY VARY AS SPECIFIED BY THE RAMSEY COUNTY HIGHWAY DEPT.

FOR LUMINAIRE, USE TRUSS - TYPE ARM OR DAVIT - TYPE ARM SHAFT EXTENSION AS SPECIFIED

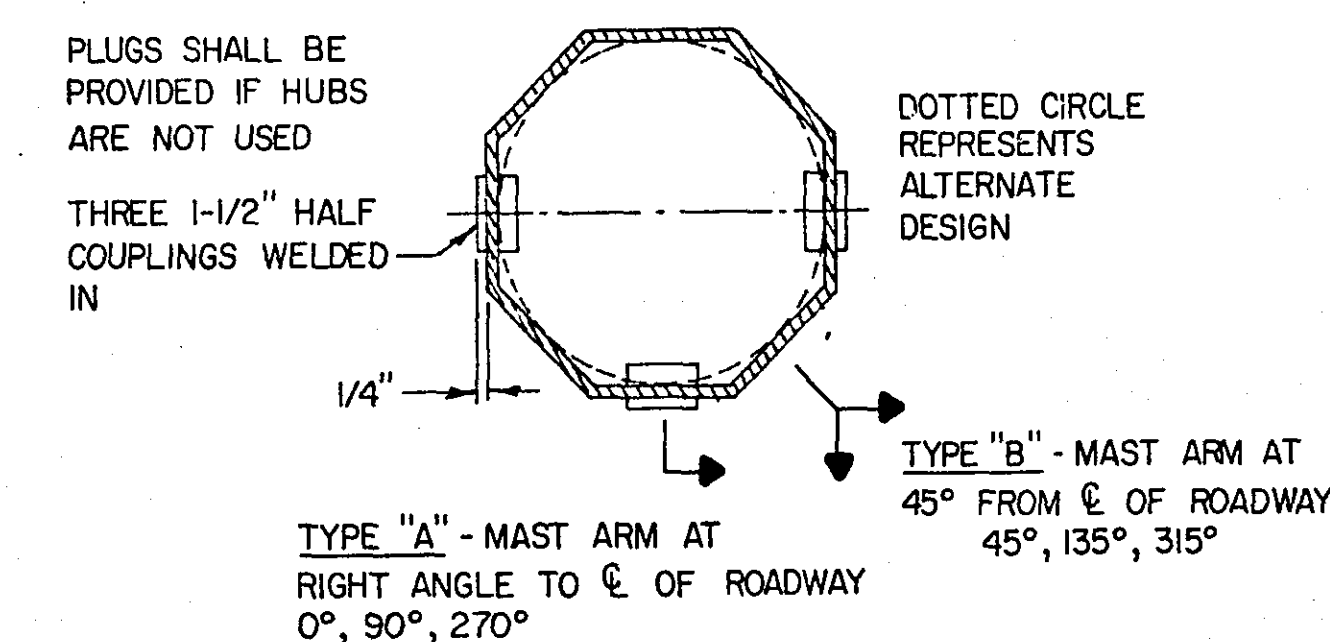


ELEVATION
POLE AND MAST ARM

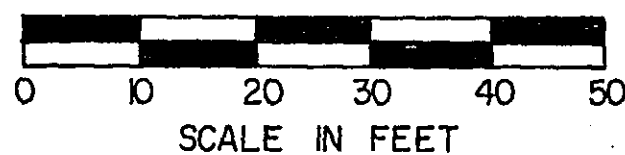
DETAIL F
TRANSFORMER BASE CONNECTION



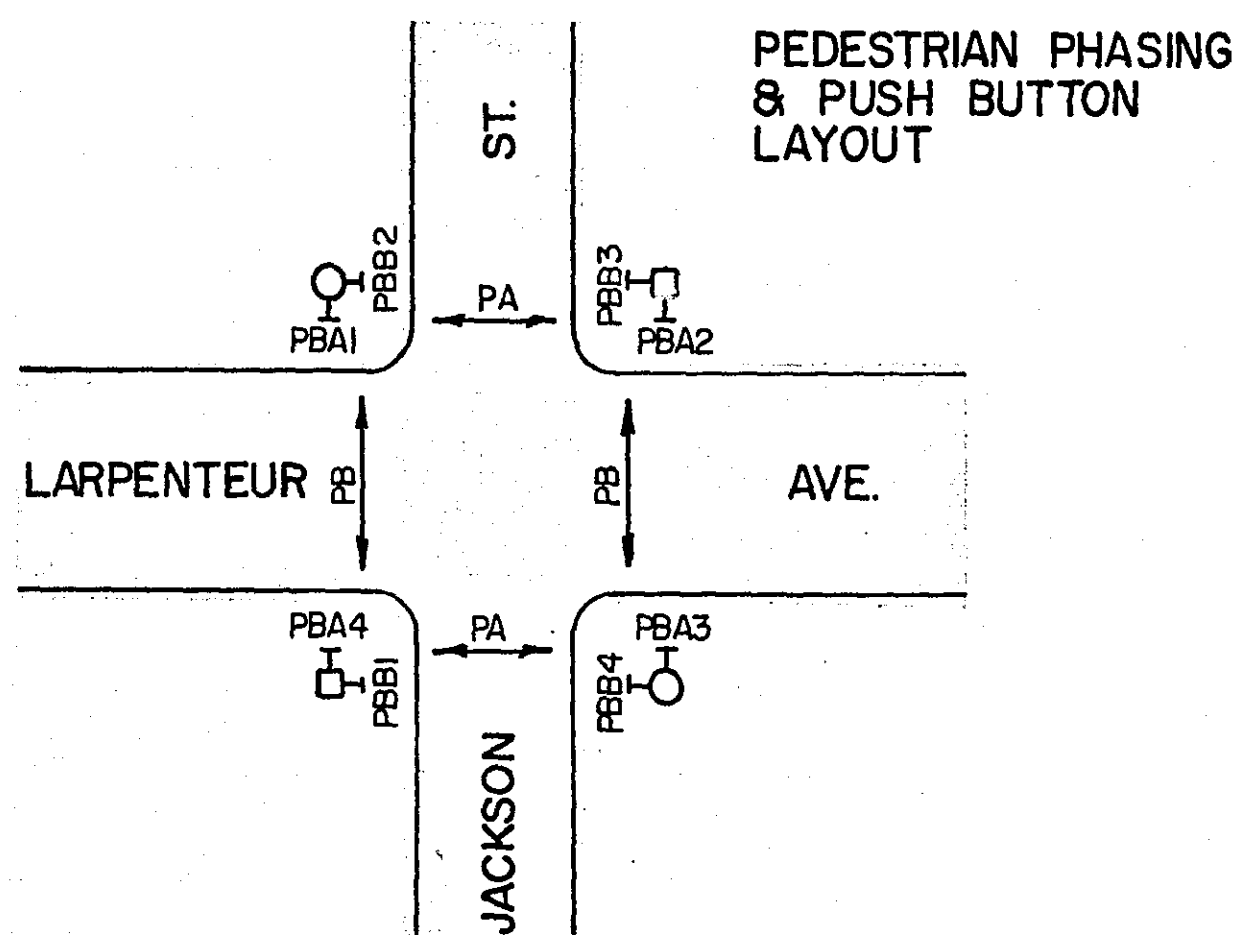
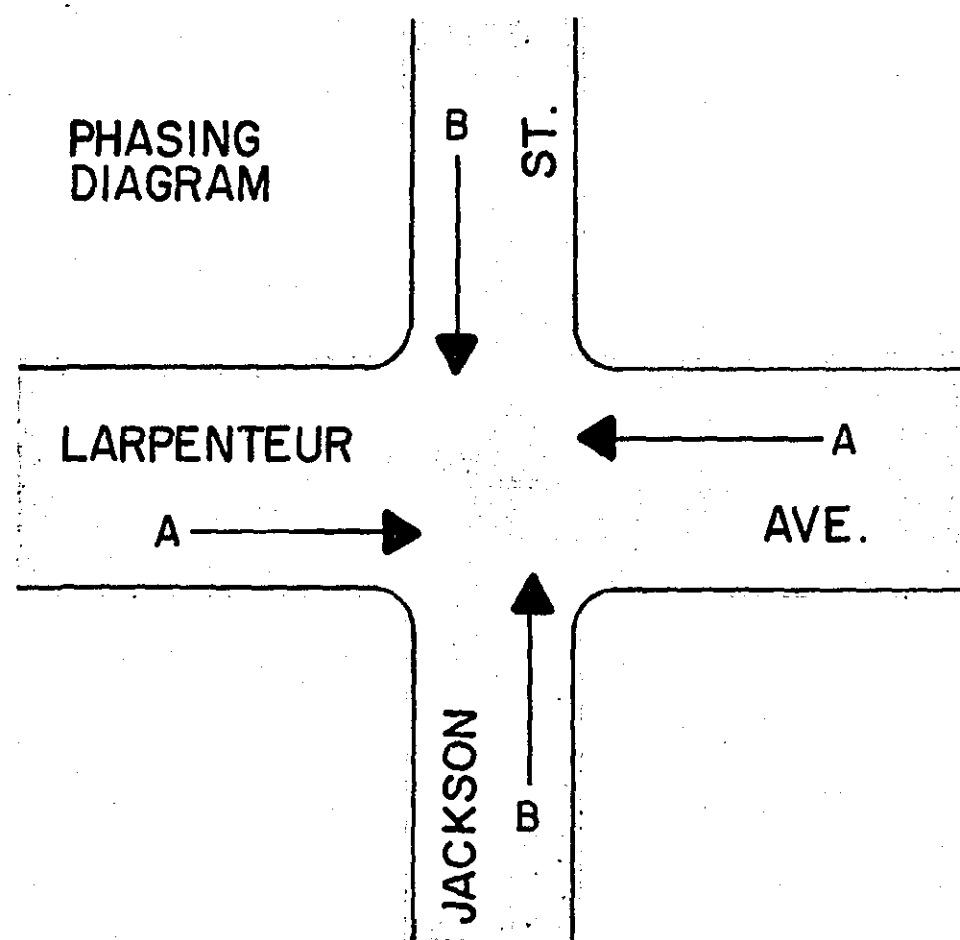
DETAIL D
MAST ARM ADAPTOR



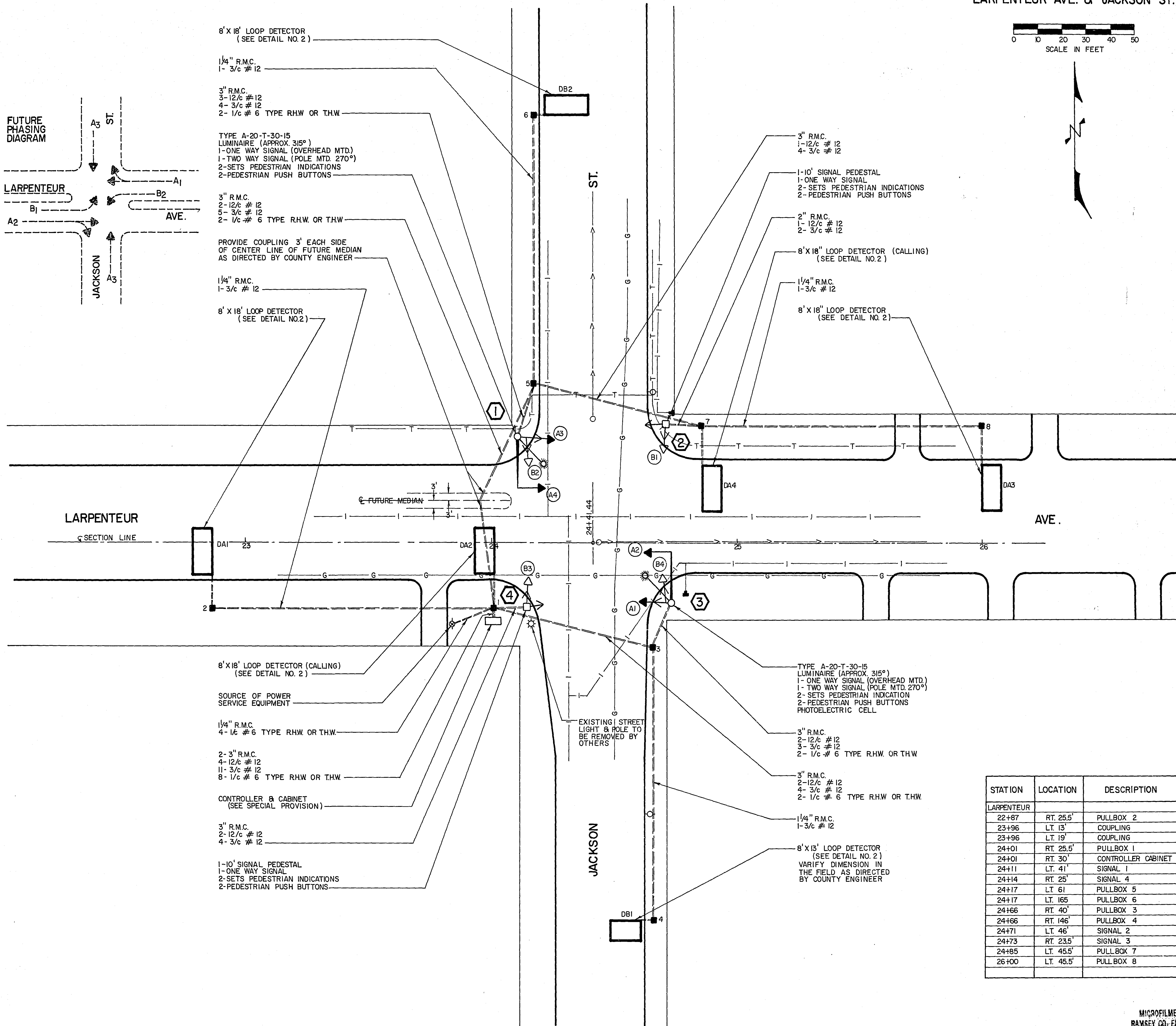
SECTION E-E
POLE-MOUNTED SIGNAL HUB



LEGEND OF SYMBOLS	
	CONTROLLER
	PEDESTAL
	HANDHOLE (PULLBOX)
	RIGID METALLIC CONDUIT (R.M.C.)
	MAST ARM & POLE
	SIGNAL FACE
	SIGNAL FACE WITH BACKGROUND SHIELD
	PEDESTRIAN INDICATION
	SOURCE OF POWER (S.O.P.)
	MAST ARM & LUMINAIRE



FACE	PHASE	FLASH	INDICATION SIZE					
			R	Y	G	←	↑	→
A1	A	R	12"	12"	12"	-	-	-
A2	A	R	12"	12"	12"	-	-	-
A3	A	R	12"	12"	12"	-	-	-
A4	A	R	12"	12"	12"	-	-	-
B1	B	R	12"	12"	12"	-	-	-
B2	B	R	12"	12"	12"	-	-	-
B3	B	R	12"	12"	12"	-	-	-
B4	B	R	12"	12"	12"	-	-	-



STATION	LOCATION	DESCRIPTION
LARPEN TEUR		
22+87	RT. 25.5'	PULLBOX 2
23+96	LT. 13'	COUPLING
23+96	LT. 19'	COUPLING
24+01	RT. 25.5'	PULLBOX 1
24+01	RT. 30'	CONTROLLER CABINET
24+11	LT. 41'	SIGNAL 1
24+14	RT. 25'	SIGNAL 4
24+17	LT. 61'	PULLBOX 5
24+17	LT. 165'	PULLBOX 6
24+66	RT. 40'	PULLBOX 3
24+66	RT. 146'	PULLBOX 4
24+71	LT. 46'	SIGNAL 2
24+73	RT. 23.5'	SIGNAL 3
24+85	LT. 45.5'	PULLBOX 7
26+00	LT. 45.5'	PULLBOX 8

