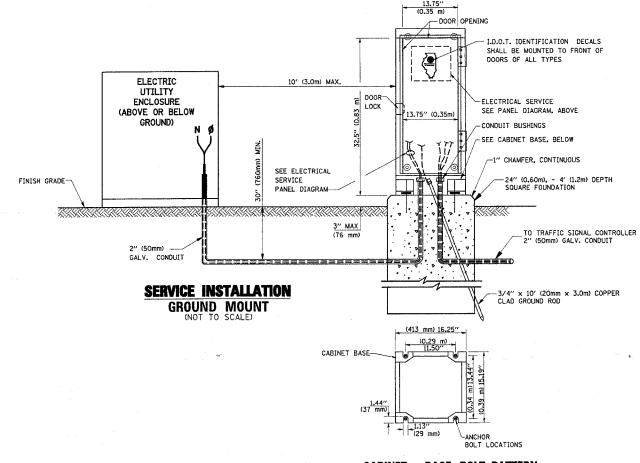


## ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE) SERVICE INSTALLATION POLE MOUNT (SHOWN)



**CABINET - BASE BOLT PATTERN** (NOT TO SCALE)

NOTES:

- HANDHOLF COVER

DETAIL "A"

HANDLE

DETAIL "B"

- RECESSED COVER

—U.L. LISTED

DIRECT BURIAL

HEAVY DUTY COPPER COMPRESSION

GROUNDING TERMINAL (TYPICAL)

- GROUNDING CABLE (PAID FOR SEPARATELY)

GROUND CABLES TO CONTROLLER DOUBLE HANDHOLE

POST AS REQ'D.

- SEE DETAIL "B"

CAST CORNER FRAME WEB

ANTI-CORROSION COMPOUND SHALL BE APPLIED ON ALL

BOLT/ CONNECTION ASSEMBLIES

-STAINLESS STEEL NUT AND 2 STAINLESS STEEL WASHERS

SEE DETAIL "A"

(2) 1/2"  $\times$  1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL)

REQUIRED. ALL

HANDHOLES

UL LISTED GROUND COMPRESSION CONNECTOR

UL LISTED GROUND

COMPRESSION CONNECTOR WITH STAINLESS STEEL NUT

-1/C #6

(GREEN)

HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

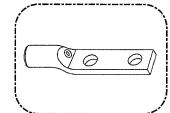
F.A.P. SECTION COUNTY 348 3130(A&B)RS-1 COOK 29 ... STA. TO STA. FED. ROAD DIST. NO. \_ ILLINOIS FED. AID PROJECT

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## GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP. NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.), GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS. THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC. ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.

- 2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
- 3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- 4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. • GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.

5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.

ACCESS COVER-GROUND LUG (BURNDY TYPE KC, K2C, GROUNDING ELECTRODE CONDUCTOR 1/C #6 GROUND (GREEN COLOR CODED OR APPROVED EQUAL) HEAVY DUTY GROUND ROD CLAMP, EXOTHERMIC WELD, OR U.L. APPROVED CONNECTOR. EQUIPMENT GROUNDING 1/C #6 GROUND (GREEN COLOR CODED)-(TYPICAL FOR ALL GROUND RODS) -3/4" x 10' (20mm x 3.0m) COPPER CLAD GROUND ROD

## MAST ARM POLE / POST-GROUNDING DETAIL (NOT TO SCALE)

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	ILLINOIS DEPARTMEN	II OF TRANSPORTATION
CADD	5/30/00		
CADD	3/15/01	DISTRICT 1	
BUREAU OF TRAFFIC	1/01/02	D1311(101 1	
		I STANDARD TR	AFFIC SIGNAL
		DESIGN DETAILS	
	I		
	T	VERT	DRAWN BY: RWP

SCALE: VERT. NONE DATE 5/24/2005

EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

- EXISTING HANDHOLE FRAME AND COVER

(NOT TO SCALE)

TS05 REVISION DATE: 01/01/02

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