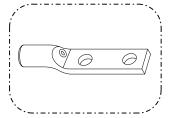
FED. ROAD DIST, NO. ILLINOIS FED. AID PROJECT

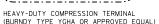
### SECTION COLINTY NOTES: 307 130N-3 (11) DUPAGE 141 112 STA. GROUNDING SYSTEM

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.

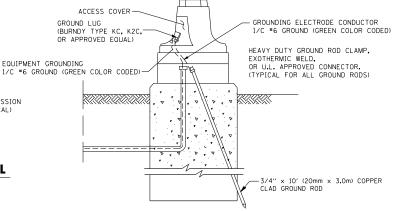






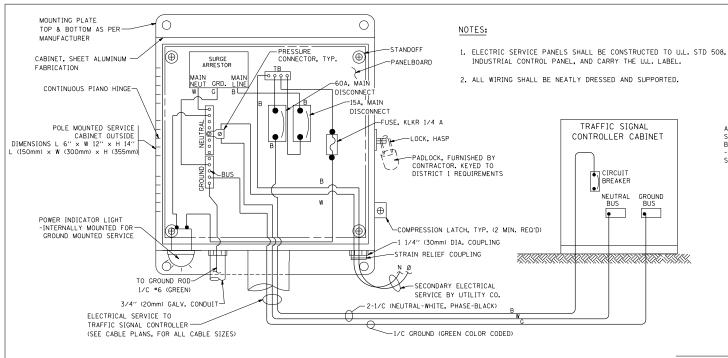
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

• 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.



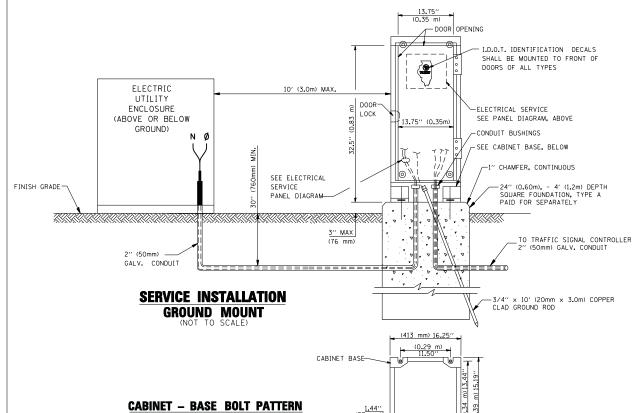
MAST ARM POLE / POST-GROUNDING DETAIL

MOT TO SCALE	(NOT TO SCALE)		
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	DANCDODTATION
NAME	DATE	ILLINOIS DEPARTMENT OF TH	VANSFORTATION
CADD	5/30/00		
CADD	3/15/01	DISTRICT ONE	
BUREAU OF TRAFFIC	1/01/02		
BCK	10/28/09	STANDARD TRAFFI	C SIGNAL
		DESIGN DETAILS	
		SCALE: NONE	DRAWN BY: BCK DESIGNED BY: DAD
		33.122	CHECKED BY: DAD
	1		SHEET 3 OF 6



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

-ANCHOR BOLT LOCATIONS



(NOT TO SCALE)

# HANDHOLE COVER & FRAME - GROUNDING DETAIL

- HANDHOLF COVER

DETAIL "A"

DETAIL "B"

GROUND CABLES TO CONTROLLER DOUBLE HANDHOLE

> TO POLE OR POST AS REQ'D.

HANDHOLE COVER

ANDHOLE FRAME

(NOT TO SCALE)

CAST CORNER FRAME WEB

ANTI-CORROSION COMPOUND

BOLT/ CONNECTION ASSEMBLIES.

-STAINLESS STEEL BOLT, NUT AND 2 STAINLESS STEEL WASHERS

UL LISTED GROUND

COMPRESSION TERMINAL WITH STAINLESS STEEL NUT. ANTI-CORROSION COMPOUND

SHALL BE APPLIED TO THE ASSEMBLY.

- SEE DETAIL "B"

RECESSED COVER

-U.L. LISTED

DIRECT BURIAL

SHALL BE APPLIED ON ALL

SEE DETAIL "A"

CABLE HOOKS REQUIRED, ALL HANDHOLES

FOLIPMENT GROUNDING 1/C #6 GROUND (GREEN COLOR CODED) UL LISTED GROUND — COMPRESSION TERMINAL

(2) 1/2" x 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO FRAME AND TO COVER. (TYPICAL) ANTI-CORROSION COMPOUND SHALL BE APPLIED TO EACH ASSEMBLY. EQUIPMENT GROUNDING HEAVY DUTY COPPER COMPRESSION GROUNDING TERMINAL, (TYPICAL) ∠ EXISTING HANDHOLF GROUNDING CABLE

## **EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL**

(NOT TO SCALE)