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

# SERVICE INSTALLATION POLE MOUNT (SHOWN)

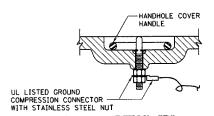
-1/C GROUND (GREEN COLOR CODED)

DOOR OPENING LD.O.T. IDENTIFICATION DECALS SHALL BE MOUNTED TO FRONT OF DOORS OF ALL TYPES **ELECTRIC** 10' (3,0m) MAX. UTILITY DOOR -ELECTRICAL SERVICE ENCLOSURE LOCK SEE PANEL DIAGRAM, ABOVE (ABOVE OR BELOW 13.75" (O.35m GROUND) -CONDUIT BUSHINGS SEE CABINET BASE, BELOW " CHAMFER, CONTINUOUS SEE ELECTRICAL 24" (0.60m), - 4" (1.2m) DEPTH SOUARE FOUNDATION FINISH GRADE PANEL DIAGRAM-3" MAX (76 mm) TO TRAFFIC SIGNAL CONTROLLER 2" (50mm) GALV. CONDUIT 2" (50mm) GALV. CONDUIT SERVICE INSTALLATION -3/4" × 10' (20mm × 3.0m) COPPER CLAD GROUND ROD **GROUND MOUNT** (413 mm) 16.25" (0.29 m) 11.50" CARINET BASE (37 mm) -ANCHOR BOLT LOCATIONS

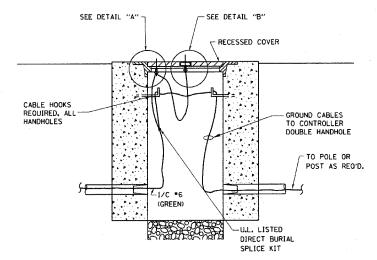
(SEE ALL CABLE PLAN, FOR ALL CABLE SIZES)

**CABINET - BASE BOLT PATTERN** 

- HANDHOLF COVER ANDHOLE FRAME CAST CORNER FRAME WEB-UL LISTED GROUND COMPRESSION CONNECTOR ANTI-CORROSION COMPOUND
SHALL BE APPLIED ON ALL
BOLT/ CONNECTION ASSEMBLIES. DETAIL "A" -STAINLESS STEEL NUT AND 2 STAINLESS STEEL WASHERS

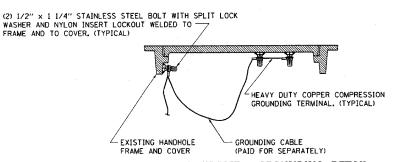


DETAIL "B"



## HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

NOTES:

### 469 396 TO STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SECTION

GROUNDING SYSTEM

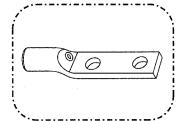
CONTRACT #60826

CONTRACT NO.

COUNTY

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.

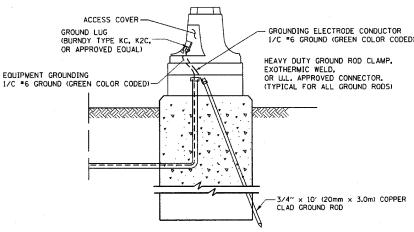


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



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.



# MAST ARM POLE / POST-GROUNDING DETAIL

5/30/0 BUREAU OF TRAFFIC 1/01/0

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE

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