CONTRACT NO. 60CO3 SECTION COUNTY COOK 1374 0406 - WRS 43 24 TO STA.

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

D-91-106-07

NOTES: GROUNDING SYSTEM

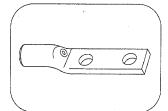
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE $3/4^{\prime\prime}$ DIA. \times 10'-0" (20mm \times 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

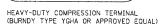
ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC.

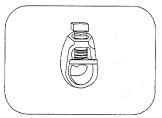
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.

ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT

- 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.

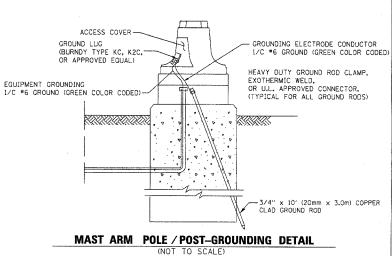






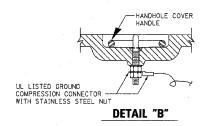
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

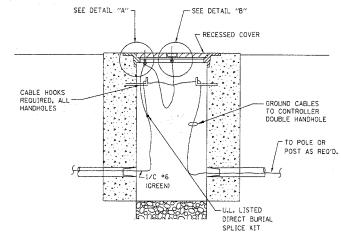
• ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED. • GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS SCALE: VERT. NONE DRAWN BY: RWP DESIGNED BY: DAC CHECKED BY: DAZ SHEET 3 OF 4 DATE 01-31-2006

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL. MANDHOLE COVER 2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED. TRAFFIC SIGNAL CAST CORNER FRAME WEB-CONTROLLER CABINET UL LISTED GROUND -COMPRESSION CONNECTOR DETAIL "A" -STAINLESS STEEL NUT AND 2 STAINLESS STEEL WASHERS





HANDHOLE COVER & FRAME - GROUNDING DETAIL

(NOT TO SCALE)

TO TRAFFIC SIGNAL CONTROLLER 2" (50mm) GALV. CONDUIT -3/4" x 10' (20mm x 3.0m) COPPER CLAD GROUND ROD

CIRCUIT

BREAKER

BUS

, NEUTRAL GROUND

BUS

(2) 1/2" \times 1 1/4" STAINLESS STEEL BOLT WITH SPLIT LOCK WASHER AND NYLON INSERT LOCKOUT WELDED TO $\overline{}$ FRAME AND TO COVER. (TYPICAL) HEAVY DUTY COPPER COMPRESSION GROUNDING TERMINAL. (TYPICAL) EXISTING HANDHOLE FRAME AND COVER GROUNDING CABLE (PAID FOR SEPARATELY)

EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL

POWER INDICATOR LIGHT
-INTERNALLY MOUNTED FOR—
GROUND MOUNTED SERVICE ELECTRICAL SERVICE TO TRAFFIC SIGNAL CONTROLLER -(SEE ALL CABLE PLAN, FOR ALL CABLE SIZES)

FINISH GRADE-

 $^{\prime}$

TO GROUND ROD-

1/C =6 (GREEN)

ELECTRIC

UTILITY

ENCLOSURE

(ABOVE OR BELOW

GROUND)

2" (50mm)

GALV. CONDUIT

SERVICE INSTALLATION

GROUND MOUNT

3/4" (20mm) GALV, CONDUIT

SURGE ARRESTOR

GRD. LINE

-PRESSURE

CONNECTOR, TYP.

TOP & BOTTOM AS PER-

CABINET, SHEET ALUMINUM -

CONTINUOUS PIANO HINGE-

POLE MOUNTED SERVICE

DIMENSIONS L 6" x W 12" x H 14"

CABINET OUTSIDE

MANUFACTURER

FABRICATION

CABINET - BASE BOLT PATTERN

BOLT LOCATIONS

NOTES:

PADLOCK, FURNISHED BY

DISTRICT 1 REQUIREMENTS

-COMPRESSION LATCH, TYP. (2 MIN, REQ'D)

CONTRACTOR, KEYED TO

-1 1/4" (30mm) DIA, COUPLING

--- SECONDARY ELECTRICAL

-1/C GROUND (GREEN COLOR CODED)

(NEUTRAL-WHITE, PHASE-BLACK)

(0.35 m)

0/10

13.75" (0.35m)

(413 mm) 16,25"

DOOR OPENING

I.D.O.T. IDENTIFICATION DECALS
SHALL BE MOUNTED TO FRONT OF DOORS OF ALL TYPES

ELECTRICAL SERVICE

CONDUIT BUSHINGS

SEE PANEL DIAGRAM, ABOVE

-SEE CABINET BASE, BELOW

CHAMFER, CONTINUOUS

SQUARE FOUNDATION

' (0.60m), - 4' (1.2m) DEPTH

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

DOOR-

LOCK

CABINET BASE-

1.44" (37 mm)

SEE ELECTRICAL

PANEL DIAGRA

SERVICE

SERVICE BY UTILITY CO.

-STRAIN RELIEF COUPLING

-STANDOFF

-PANELBOARD

FUSE, KLKR 1/4 A

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___15A, MAIN

DISCONNECT