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

NOTES:

- 1. ELECTRIC SERVICE SHALL BE OF THE VOLTAGE INDICATED OR DESIGNATED BY THE ENGINEER, AND SERVICE DROP CABLE SHALL BE COMPATIBLE WITH THE SERVICE ACCORDINGLY, SOME INSTALLATIONS MAY CALL FOR SERVICE ENTRANCE EQUIPMENT SUITABLE FOR 3-WIRE SERVICE EVEN THOUGH INITIALLY WIRED FOR 2-WIRE SERVICE.
- THE POLE-MOUNTED ELECTRIC SERVICE BOX DETAIL DEPICTS THE BASIC CONSTRUCTION OF THE EOUTPMENT. SLIGHT MODIFICATIONS APPLY FOR DIFFERING SERVICES AND APPLICATIONS AS FOLLOWS:
 - TYPE A FULLY EQUIPPED FOR 240/120V. 3W SERVICE, COMPLETE WITH LIGHTING MAIN BREAKER
 - TYPE A1 FULLY EQUIPPED FOR 240/120V. 3W SERVICE, BLANK COVER IN LIEU OF LIGHTING MAIN BREAKER
 - TYPE B EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 60A. TRAFFIC SIGNALS MAIN BREAKER
 - TYPE BI EQUIPPED FOR 120V. SERVICE, COMPLETE WITH 1P, 40A. TRAFFIC SURVEILLANCE MAIN BREAKER
- 3. THE ELECTRIC SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LISTED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.
- 4. THE ELECTRIC SERVICE EQUIPMENT ENCLOSURE SHALL BE
 NEMA 4X STAINLESS STEEL, NOMINALLY 12"W X 16"H X 8"D, WITH
 A PIANO-HINGED DOOR, STEEL BACK PANEL, FAST-ACTING
 STAINLESS STEEL ENCLOSURE CLAMPS, PADLOCK PROVISIONS
 AND DOOR STOP, HOFFMAN CATALOG NO. A-16H1208SS6LP/A-16 P12/A-DSTOPK/C-PMK12. OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 240 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/ TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
- 6. THE SURGE PROTECTOR SHALL BE SUITABLE FOR 240/120 VOLT SINGLE PHASE 60HZ AC ELECTRICAL SERVICE, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICROSECONDS, RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, CUTLER-HAMMER CMOV230L065XST OR APPROVED EQUAL.
- 7. BUS BARS, CONNECTORS, AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED, AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS, OR THE ASSEMBLY SHALL BE A MANUFACTURED SPECIALTY PANELBOARD, CUTLER-HAMMER PRL2A OR APPROVED EQUAL.
- 8. THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE
 CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS
 AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS
 SHALL BE PAINTED GREEN. THE HEADS OF NEUTRAL SCREWS SHALL
 BE PAINTED WHITE. THE SERVICE NEUTRAL AND SERVICE GROUNDING
 ELECTRODE CONDUCTOR SHALL BE TERMINATED ADJACENT TO EACH
 OTHER AT THE DIVIDE BETWEEN THE SECTIONS AND WIRING SHALL
 BE TERMINATED ONLY LIPON THE APPROPRIATE SECTION BE TERMINATED ONLY UPON THE APPROPRIATE SECTION.
- 9. THE WIRING TERMINALS, INCLUDING THE GROUND/NEUTRAL BAR SHALL BE ARRANGED TO PROVIDE ADEQUATE ROOM FOR PERFORMING FIELD TERMINATIONS.
- A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE MECHANICALLY SECURED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
- 11. A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN
- 12. LUGS AND CONNECTORS SHALL BE RATED FOR 75°C CONDUCTOR.
- 13. THE EXACT MOUNTING HEIGHT OF THE BOX SHALL BE FIELD DETERMINED TO AVOID OBSTRUCTIONS AND PUBLIC ACCESS. TYPICAL HEIGHT SHALL BE APPROXIMATELY 10 FEET ABOVE GRADE.

DISCONNECT MOUNTING DETAIL 2P 40A 1P 60A GREEN TRAFFIC SIGNAL MAIN FEEDER 2/C*6 & 1*8 GND. MULTI-CONDUCTOR CABLE

LIGHTING MAIN FEEDER 3/C*8 & 1*10 GND. MULTI-CONDUCTOR CABLE

- 16"H × 12"W × 8"D MAX.

(406.4mm×304.8mm×203.2mm)
NEMA 4X ENCLOSURE

UNISTRUT CHANNEL FOR MOUNTING OF SERVICE BOX.

WOOD POLE

- STAINLESS STEEL STRAP (TYP.)

2x1/2"x6" LAG SCREW TO POLE (TYP.)

SURGE ARRESTER RED BLACK -NEUTRAL AN GROUND BUS WHITE WHITE GREEN INCOMING SERVICE: 120V. 1 PHASE WITH 2/C*4 OR 240V, 1 PHASE WITH 3/C*4

N.T.S.

LAYOUT & CIRCUIT DIAGRAM (SEE NOTE 10)

PADLOCK PROVISIONS

POLE-MOUNTED ELECTRIC SERVICE
BOX, TYPE AS INDICATED. BOX SHALL
BE COMPLETE WITH STAINLESS STEEL
STRAPS AND MOUNTING ACCESSORIES
AS REQUIRED FOR A SECURE, STABLE
ATTACHMENT TO THE POLE.

6" DECAL ON FRONT COVER

POLE-MOUNTED ELECTRIC SERVICE ENTRANCE GENERAL LAYOUT DIAGRAM

(0

ENCLOSURE BACK-PANEL

SURGE ARRESTER

[2]

2 POLE 40 AMP

LIGHTING

(a)

TERMINAL FOR SURGE ARRESTER CONNECTION

-INSULATED PLATE

--- CIRCUIT BREAKER (S)

ENGRAVED NAMEPLATES ON COVER PLATE

- LIGHTING MAIN FEEDER, (WHERE APPLICABLE), 3*8 & 1*10 GND. MULTI-CONDUCTOR CABLE

- TRAFFIC SIGNAL MAIN FEEDER 2*6 & 1*8 GND. MULTI-CONDUCTOR CABLE

-3/C#4 RHW XLP JACKETED SERVICE ENTRANCE CABLE (FREE AIR)

2"C, THREADED HUB W/INSULAT THROAT

THREADED CONDUIT NIPPLE

2" RIGID, THREADED CONDUIT OFF-SET BEND TO SUIT

2" 3-PIECE CONDUIT COUPLING (THREADED)

SERVICE GROUND WELL-ACHIEVE 10 OHMS OR LESS

MALEABLE IRON CONDUIT STRAP AND

LAG SCREW (TYP.)

ISOLATED MOUNTING CONNECTION

COPPER BUS, ISOLATED FROM BACK PANEL, INSULATED BETWEEN PHASES (TYP.)

SEE NOTE 6-

HOLD-OPEN ATTACHMENT-(DOOR STOP)

NEUTRAL / GROUND 1" × 6" × 1/4" COPPER BAR (SEE NOTE 7)

BONDED MOUNTING CONNECTION

CASE GROUNDING-SERVICE GROUNDING— ELECTRODE CONDUCTOR 1*6, INSULATED

3/4" THREADED HUB W/INSULATED THROAT

¾" WET-LOCATION — CORD CONNECTOR W/MALE THREAD END

U-NAIL (TYP.)

3/4" 3-PIECE CONDUIT COUPLING (THREADED)

¾" RIGID, THREADED -CONDUIT OFF-SET TO SUIT

¾" RIGID CONDUIT — EXTEND TO SERVICE GROUND WELL

¾" 3-PIECE CONDUIT COUPLING (THREADED)

2-HOLE GALVANIZED CONDUIT STRAPS W/GALV. ROOFING NAILS (TYP.)

SCHEMATIC DIAGRAM

ILLINOIS DEPARTMENT OF TRANSPORTATION

COMBINATION LIGHTING & TRAFFIC POLE MOUNTED ELECTRIC SERVICE BOX DETAIL

DATE: 1/9/2007

DRAWN BY CHECKED BY

BE-230

BE-230

= 1/9/2007 = ci\projec = 49,9999 ' = ulrichkd DATE NAME SCALE NAME

REVISION DATE: 01/01/07