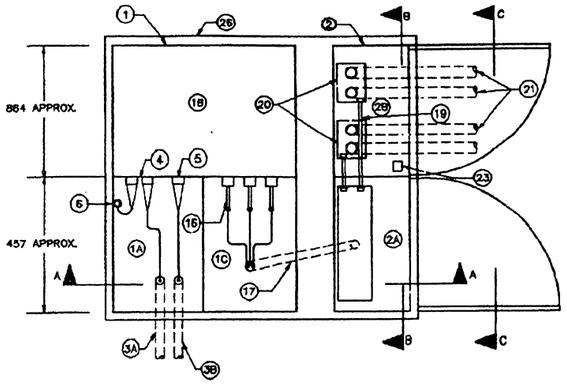
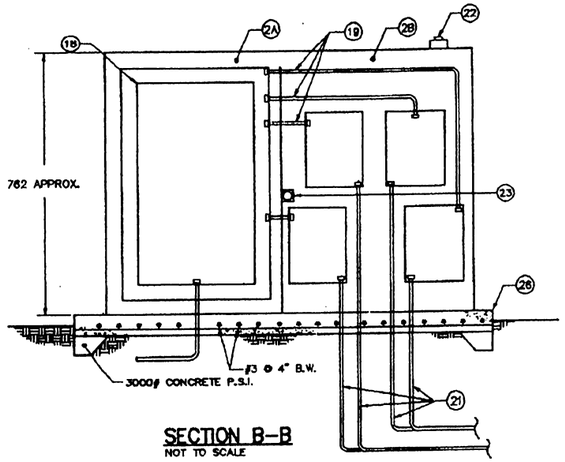


TOP VIEW
NOT TO SCALE



SECTION B-B
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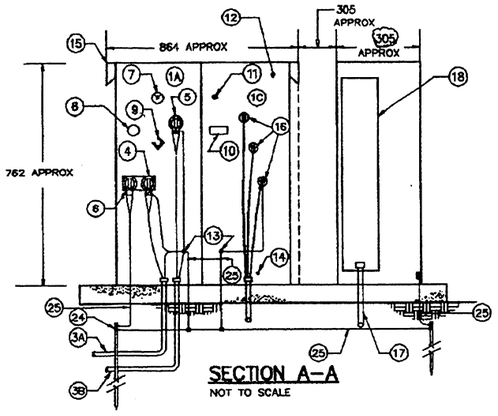

SECTION A-A
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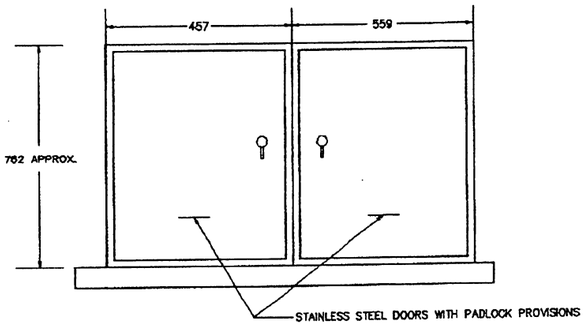
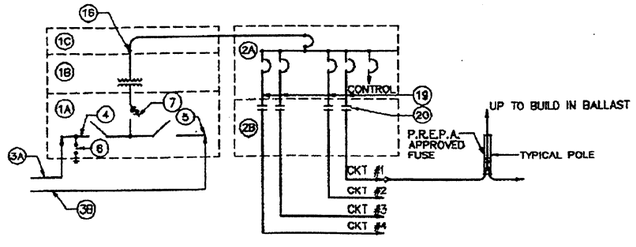


SECTION C-C FRONT VIEW LIGHTING CONTROL CABINET
NOT TO SCALE



SINGLE LINE DIAGRAM

SPECIAL NOTE:

THIS PAD MOUNTED STANDARD SHALL BE USED ONLY WITH EXPLICIT APPROVAL OF P.R.H.T.A.

DESCRIPTION

(1) STAINLESS STEEL PAD MOUNTED TRANSFORMER DEAD FRONT TYPE P.R.E.P.A. APPROVED CONSISTING OF THE FOLLOWING (P.R.E.P.A. STANDARD URD-20).

(1A) HIGH VOLTAGE COMPARTMENT.

(1B) TRANSFORMER NON-PCB OIL FILLED 25 KVA, 120/240V, 1 PHASE, 3 WIRE SECONDARY WITH #4 - 2 1/2% TAPS:

PRIMARY VOLTAGE	SECONDARY VOLTAGE	NO. OF 2 1/2% TAPS A.N.V.	NO. OF 2 1/2% TAPS B.N.V.
13,200V.	120/240	2	2
13,200V.	240/480	2	2
8,320V AND BELOW	120/240	0	4
8,320V AND BELOW	240/480	2	2

(1C) SECONDARY TRANSFORMER CONNECTION COMPARTMENT.

(2) STAILESS STEEL LIGHTING CONTROL CABINET NEMA 4 FREE STANDING ANCHORED TO CONCRETE BASE CONSISTING OF THE FOLLOWING:

(2A) SECONDARY PANELBOARD COMPARTMENT WITH 200AMP 120/240V. 1 PHASE, 3 WIRE PANELBOARD WITH 125AMP MAIN BREAKER FOR 25KVA 200AMP MAIN BREAKER FOR 37.5KVA & 30AMP, 2P BRANCH BREAKER FOR LIGHTING CIRCUIT AND 1-20AMP, 1P BRANCH BREAKER FOR LIGHTING CONTROL. (SEE PLANS FOR FINAL CIRCUIT BREAKER SIZE) (10 KAIC MINIMUM)

(2B) LIGHTING CONTACTOR SECTION WITH 4 POLES, 50 AMPS. 240V. LIGHTING CONTACTORS WITH 120VOLT COIL.

(3A) INCOMING PRIMARY LINE CONSISTING OF ONE #2 CU XLP, 15KV. SHIELDED PVC JACKETED AND ONE #2 CU THW GROUND INSTALLED IN 4" PVC SCH. 40 CONDUIT ENCASED IN CONCRETE 1.2m BELOW GRADE AND ONE SAME SIZE SPARE CONDUIT. SEE TRENCH DETAIL.

(3B) OUTGOING PRIMARY LINE WHERE INDICATED CONSISTING OF ONE #2 CU XLP, 15KV. SHIELDED PVC JACKETED AND ONE #2 CU THW GROUND INSTALLED IN 4" PVC SCH. 40 CONDUIT ENCASED IN CONCRETE 1.2m BELOW GRADE AND ONE SAME SIZE SPARE CONDUIT. SEE TRENCH DETAIL.

(4) FEED-THROUGH INSERT WITH LOAD BREAK TERMINATION.

(5) 15KV STRESS CONE.

(6) LIGHTNING ARRESTER, METAL OXIDE VARISTOR TYPE VOLTAGE AS FOLLOWS:

2.4/4.16 KV 3 KV
4.16/7.2 KV 6 KV
4.8/8.32 KV 6 KV
7.62/13.2KV 10 KV

(7) BAYONET TYPE FUSE SIZE AS FOLLOWS:

VOLTAGE	25KVA	37.5KVA
2.4KV	15E	20E
4.8KV	7E	10E
7.62KV	5E	7E

(8) TAP CHANGER.

(9) PROVISION FOR STORAGE BUSHING FOR SAFE BREAK OPERATION.

(10) NAMEPLATE IDENTIFICATION.

(11) OIL LEVEL & FILLING PLUG.

(12) PRESSURE RELIEF VALVE.

(13) GROUND CONNECTION.

(14) DRAIN PLUG.

(15) LIFTING HOOK.

(16) LV BUSHINGS NEMA STANDARD. (SEE NOTE 8)

(17) MAIN SECONDARY FEEDER CONSISTING OF 3 #1/0 XHHW AND 1 #6 THW GND IN 2"CONDUIT.

(18) LIGHTINGPANEL BOARD SEE (2A) ABOVE.

(19) SECONDARY LIGHTING CIRCUIT CONSISTING OF 3 #2 XLP & 8 THW THW IN 1-1/2"CONDUIT

(20) LIGHTING CONTACTOR SEE (2B) ABOVE.

(21) SECONDARY LIGHTING CIRCUITS CONSISTING OF 3 #2 XLP & #8 THW IN 2" PVC CONDUIT AND ONE SAME SIZE SPARE CONDUIT.

(22) ELECTRONIC PHOTOCELL (P.R.E.P.A. APPROVED TYPE) PROVIDED WITH WIRE GUARD PROTECTION.

(23) MANUAL HAND-OF-AUTO SWITCH.

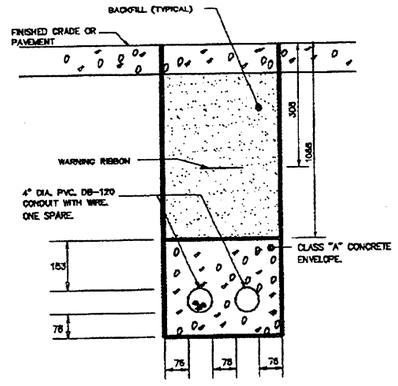
(24) 19x3.05m COPPERWELD GROUND RODS (4 MIN.REQ'D) INTERCONNECTED WITH A #4/0 AWG BARE COPPER CONDUCTOR TO FORM A GROUND LOOP.

(25) GROUNDING ELECTRODE CONDUCTOR CONSISTING OF #4/0 COPPER CONDUCTOR.

(26) CONCRETE BASE PER P.R.E.P.A. STANDARD URD-21 & URD-22.

NOTES FOR PAD MOUNTED TRANSFORMER & LIGHTING CONTROL CABINET

1- ALL TRANSFORMERS TO BE SUPPLIED WITH STAND-OFF PLUG AND DEAD END RECEPTACLES.
2- THE POSITION OF THE BAYONET FUSE AND TAP CHANGER TO BE DETERMINED BY MANUFACTURER WITH PREVIOUS COORDINATION WITH P.R.E.P.A.
3- GROUND TERMINAL TO BE WELDED OR FIXED WITH A 1/2" BOLT AND BELEVILLE
4- RE-ARRANGEMENT OF LOAD BREAK TERMINALS TO BE COORDINATED WITH P.R.E.P.A.
5 - ALL DIMENSIONS SHOWN ARE MINIMUN
6- DOORS SHALL OPEN UPWARD 180 DEGREES MIN. OR BE COMPLETELY REMOVABLE.
7- FOR BASE CONSTRUCTION AND INSTALLATION SEE DRAWING URD. TRANSFORMER CONNECTOR BAR WITH HEX. SET SCREWS APPROVED BY P.R.E.P.A.
8- SECONDARY AND NEUTRAL BUSHING SHALL BE PROVIDED WITH A SIX POSITION TRANSFORMER CONNECTOR BAR WITH HEX. SET SCREWS APPROVED BY P.R.E.P.A.
9- FINAL DIMENSIONS OF ENCLOSURES TO BE DETERMINED BY MANUFACTURER TO CONFORM TO APPLICABLE P.R.E.P.A., NEC, ANSI & NEMA STANDARDS.



TRENCH DETAIL
NOT TO SCALE

EFFECTIVE DATE: JUNE 1996

COMMONWEALTH OF PUERTO RICO
DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS
HIGHWAY AND TRANSPORTATION AUTHORITY

PAD MOUNTED SUBSTATION STANDARD III

RECOMMENDED BY:
DESIGN AREA DIRECTOR
DATE : Feb. 21, 96
APPROVED BY:
EXECUTIVE DIRECTOR
DATE :
APPROVED BY:
DIST. ENG. SUPERINT. P.R.E.P.A.
DATE : 20 SEPT 1996
APPROVED BY:
DIV. ADM. FHWA-PR DIVISION
DATE : 8/22/96

DATE	REVISION	BY

STD. DWG. LS 11 OF 17