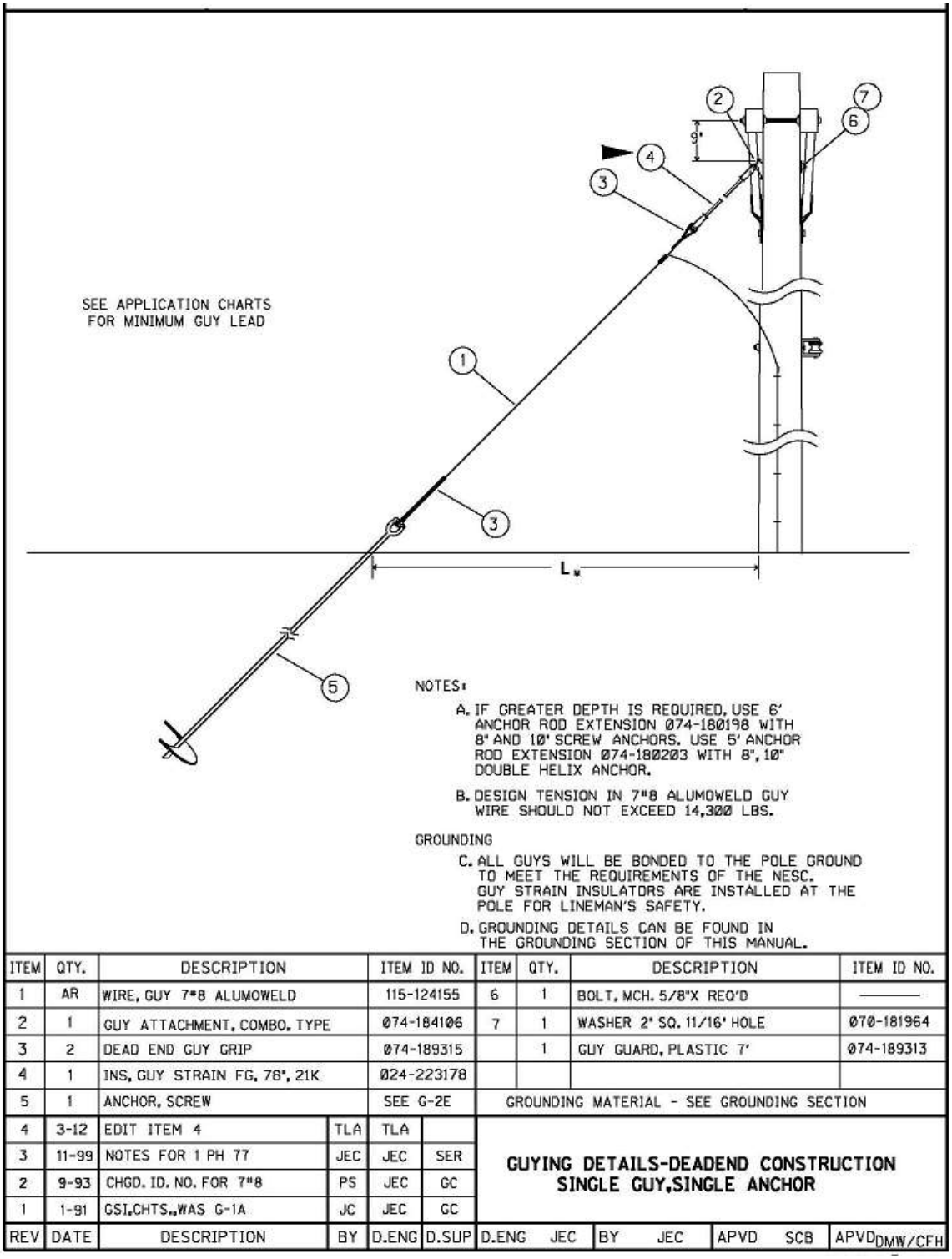
HORRY GEORGETOWN TECHNICAL COLLEGE

Appendix 1

Solicitation #IFB0153-19

Expand Existing OH and Set up a new URD Electrical Lineman Training Yard

Figure 1



NOTES:

A. IF GREATER DEPTH IS REQUIRED, USE 6' ANCHOR ROD EXTENSION Ø74-180198 WITH 8" AND 10" SCREW ANCHORS. USE 5' ANCHOR ROD EXTENSION Ø74-180203 WITH 8", 10" DOUBLE HELIX ANCHOR.

B. DESIGN TENSION IN 7#8 ALUMOWELD GUY WIRE SHOULD NOT EXCEED 14,300 LBS.

GROUNDING

C. ALL GUYS WILL BE BONDED TO THE POLE GROUND TO MEET THE REQUIREMENTS OF THE NESC. GUY STRAIN INSULATORS ARE INSTALLED AT THE POLE FOR LINEMAN'S SAFETY.

D. GROUNDING DETAILS CAN BE FOUND IN THE GROUNDING SECTION OF THIS MANUAL.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.
1	AR	WIRE, GUY 7#8 ALUMOWELD	115-124155
2	1	GUY ATTACHMENT, COMBO. TYPE	Ø74-184106
3	2	DEAD END GUY GRIP	Ø74-189315
4	1	INS, GUY STRAIN FG, 78", 21K	Ø24-223178
5	1	ANCHOR, SCREW	SEE G-2E

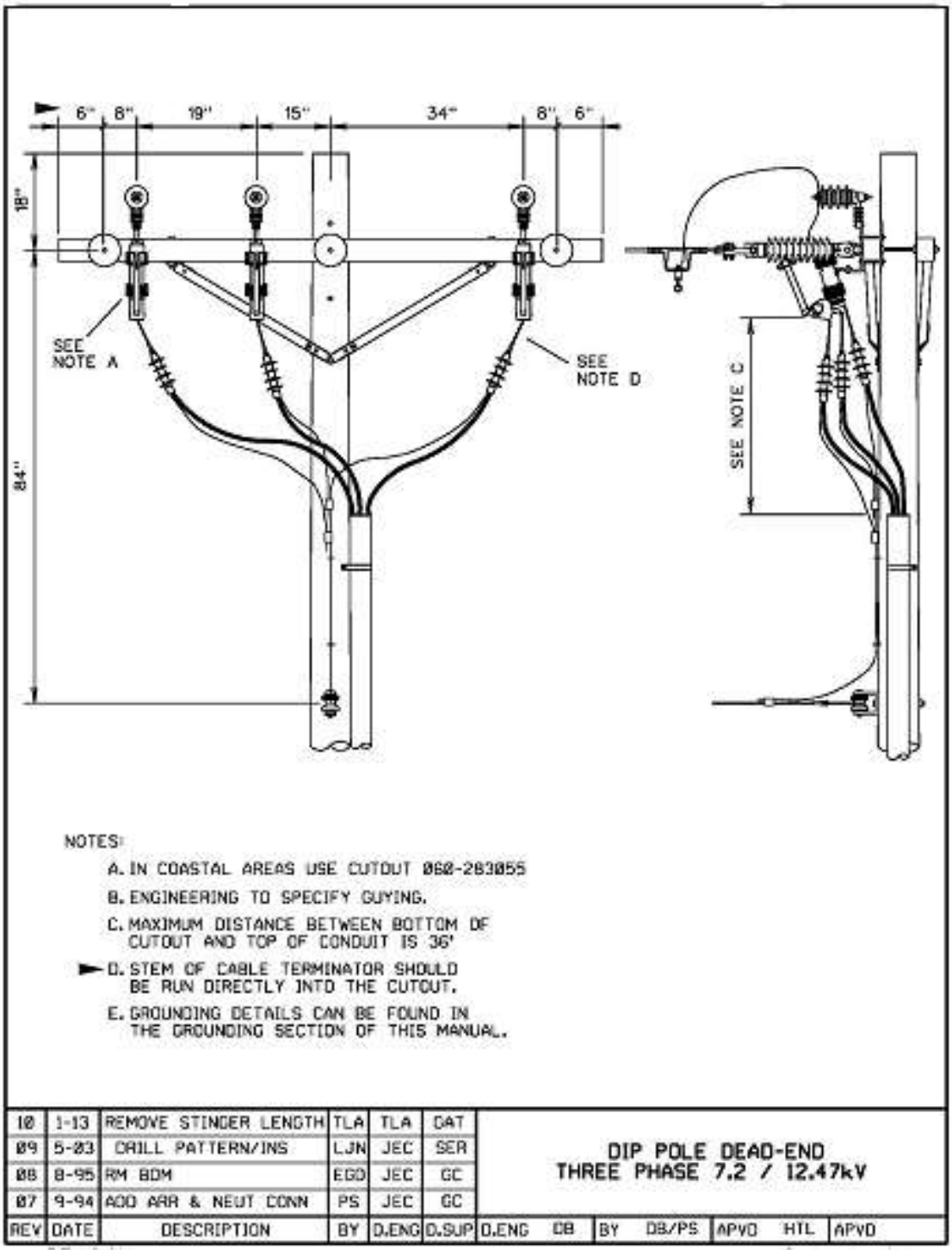
ITEM	QTY.	DESCRIPTION	ITEM ID NO.
6	1	BOLT, MCH. 5/8"X REQ'D	———
7	1	WASHER 2" SQ. 11/16" HOLE	Ø70-181964
	1	GUY GUARD, PLASTIC 7'	Ø74-189313
GROUNDING MATERIAL - SEE GROUNDING SECTION			

REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP
4	3-12	EDIT ITEM 4	TLA	TLA	
3	11-99	NOTES FOR 1 PH 77	JEC	JEC	SER
2	9-93	CHGD. ID. NO. FOR 7#8	PS	JEC	GC
1	1-91	GSI.CHTS.,WAS G-1A	JC	JEC	GC

GUYING DETAILS-DEADEND CONSTRUCTION
SINGLE GUY,SINGLE ANCHOR

D.ENG	JEC	BY	JEC	APVD	SCB	APVD DMW/CFH

Figure 2



NOTES:

A. IN COASTAL AREAS USE CUTOUT 060-283055

B. ENGINEERING TO SPECIFY GUYING.

C. MAXIMUM DISTANCE BETWEEN BOTTOM OF CUTOUT AND TOP OF CONDUIT IS 36'

D. STEM OF CABLE TERMINATOR SHOULD BE RUN DIRECTLY INTO THE CUTOUT.

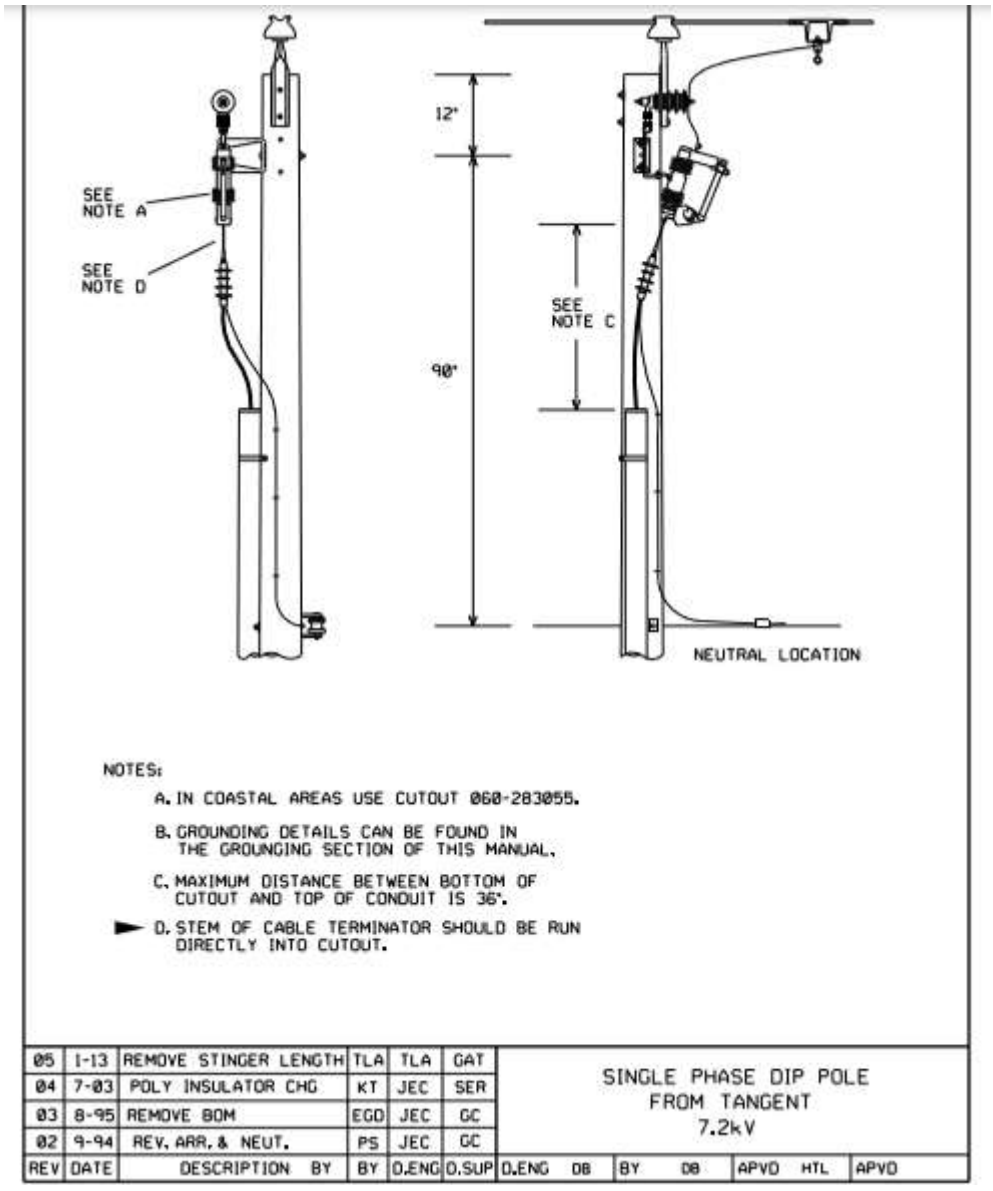
E. GROUNDING DETAILS CAN BE FOUND IN THE GROUNDING SECTION OF THIS MANUAL.

REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP
10	1-13	REMOVE STINGER LENGTH	TLA	TLA	DAT
09	5-03	DRILL PATTERN/INS	LJN	JEC	SER
08	8-95	RM BDM	EGD	JEC	GC
07	9-94	ADD ARR & NEUT CONN	PS	JEC	GC

DIP POLE DEAD-END
THREE PHASE 7.2 / 12.47kV

D.ENG DB | BY DB/PS | APVD HTL | APVD

Figure 3



NOTES:

A. IN COASTAL AREAS USE CUTOUT 060-283055.

B. GROUNDING DETAILS CAN BE FOUND IN THE GROUNGING SECTION OF THIS MANUAL.

C. MAXIMUM DISTANCE BETWEEN BOTTOM OF CUTOUT AND TOP OF CONDUIT IS 36".

D. STEM OF CABLE TERMINATOR SHOULD BE RUN DIRECTLY INTO CUTOUT.

REV	DATE	DESCRIPTION	BY	BY	O.ENG	O.SUP	O.ENG DB	BY DB	APVD HTL	APVD
05	1-13	REMOVE STINGER LENGTH	TLA	TLA		GAT	SINGLE PHASE DIP POLE FROM TANGENT 7.2kV			
04	7-03	POLY INSULATOR CHG	KT	JEC		SER				
03	8-95	REMOVE BOM	EGD	JEC		GC				
02	9-94	REV. ARR. & NEUT.	PS	JEC		GC				

Figure 4 Switchgear

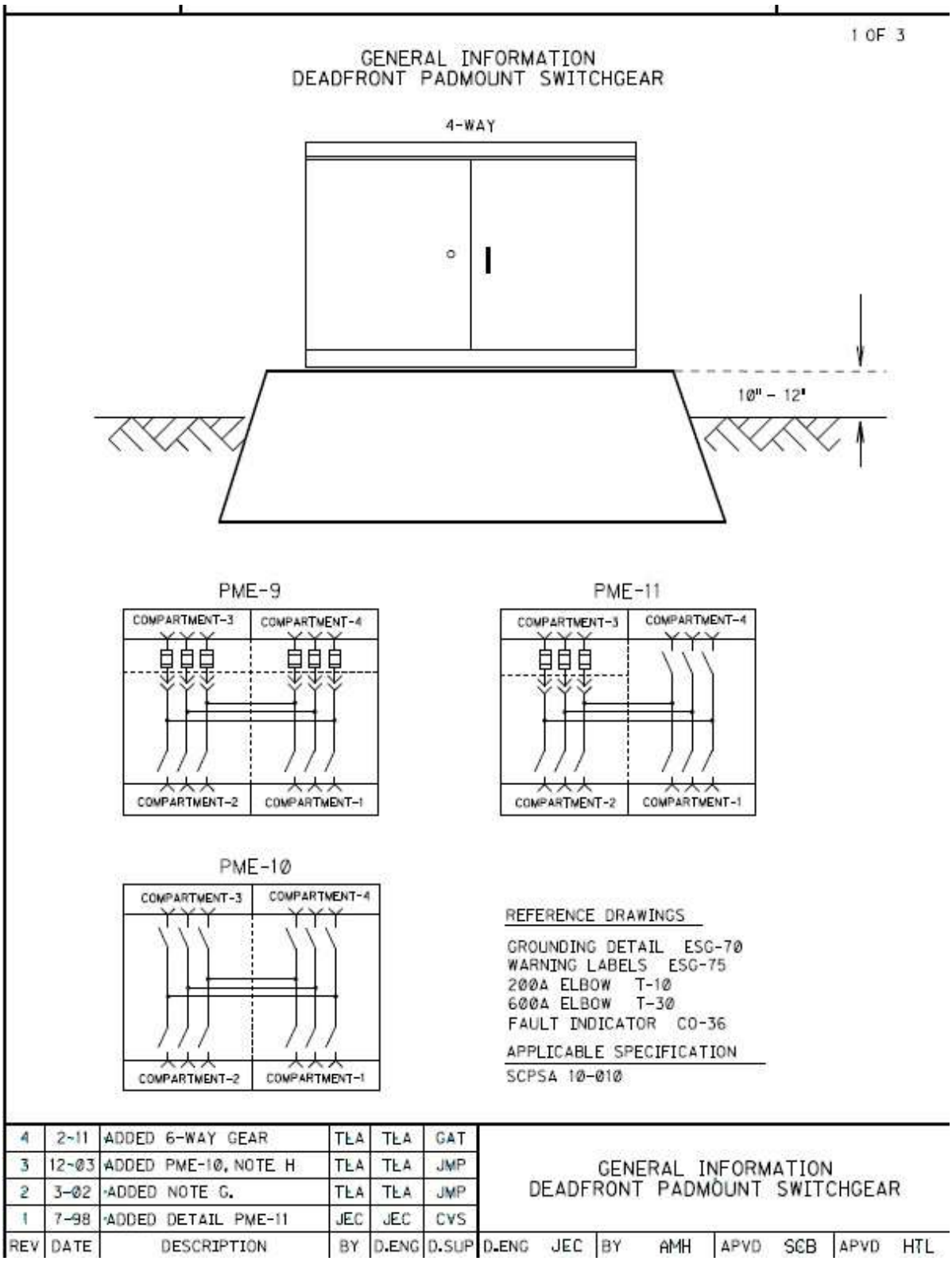
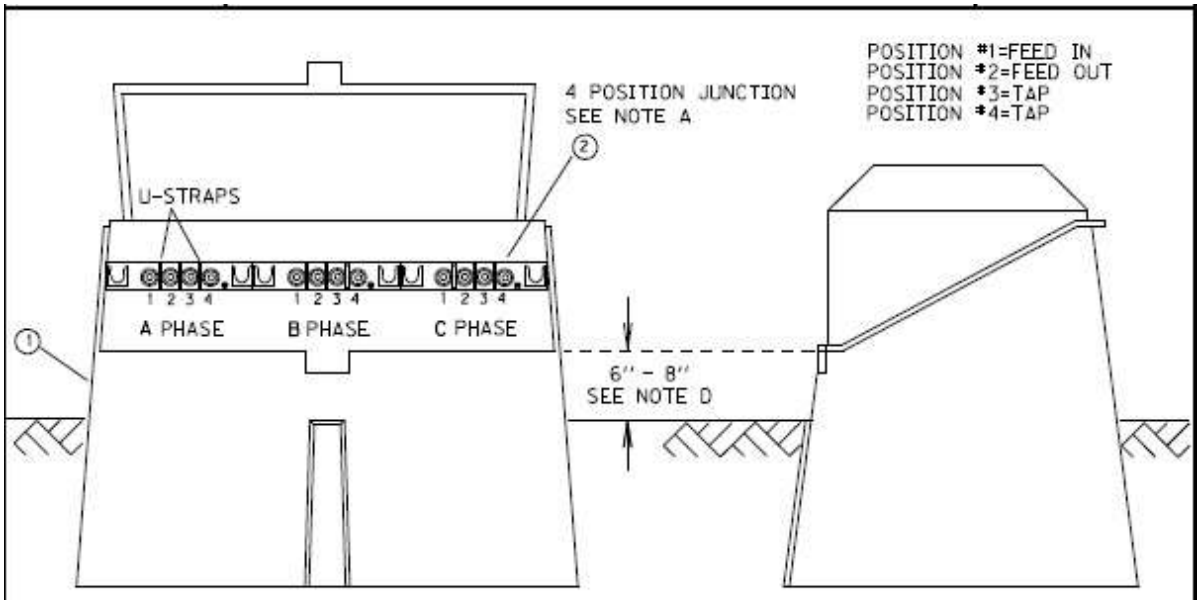


Figure 5 – 3 Phase Cabinet



CAUTION: FEED IN AND OUT DIRECTIONS CANNOT BE ASSUMED TO BE AS INDICATED ON DRAWING. ALL SAFETY PROCEDURES MUST BE FOLLOWED

NOTES:

A. ENCLOSURE WILL ACCEPT UP TO 4 CABLES PER JUNCTION. MAXIMUM NUMBER OF PRIMARY CABLES IS 12.

B. CLEAN AND LUBRICATE THE INSERT INTERFACES AFTER REMOVING THE PROTECTIVE CAPS.

C. CONDUIT SHOULD STOP A MAXIMUM OF 6" ABOVE THE BOTTOM OF THE ENCLOSURE TO ALLOW FREEDOM OF MOVEMENT TO CABLES

D. MEASUREMENT IS FROM BOTTOM OF LID TO GROUND LINE. ALL BURIAL DEPTH REQUIREMENTS ARE AT FINAL GRADE

E. REMOVE LIFTING EYES AFTER INSTALLATION.

F. ENCLOSURE SHALL BE INSTALLED TO MAINTAIN MINIMUM CLEARANCES OF 10' IN THE FRONT AND 3' ON THE BACK AND SIDES FROM ANY WALL, TRANSFORMER, OR OBSTRUCTION.

GROUNDING:

G. CABLE, ACCESSORIES, AND MOUNTING PLATES SHOULD BE BONDED TO A DRIVEN GROUND WITH #4 CONDUCTOR. MOUNTING PLATES ARE SUPPLIED WITH GROUNDING PROVISIONS.

H. DRIVEN GROUND SHOULD BE INSTALLED IN THE ENCLOSURE. CABLES SHOULD BE LOCATED BEFORE DRIVING GROUND RODS TO AVOID DAMAGE TO CABLES.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.
		200 AMP APPLICATION	
1	1	ENC, PRIM JNCT (3PH)- LOW FBGLS	550-600381
2	3	JUNCTION (200A)	071-600075
		600 AMP APPLICATION	
1	1	ENC, PRIM JNCT (3PH)- LARGE FBGLS	550-600304
2	3	JUNCTION (600A)	071-600090
		200 AMP - 35kV APPLICATION	
1	1	ENC, PRIM JNCT (3PH)- LARGE FBGLS	550-600304
2	3	JUNCTION (200A) - 35kV	071-600080

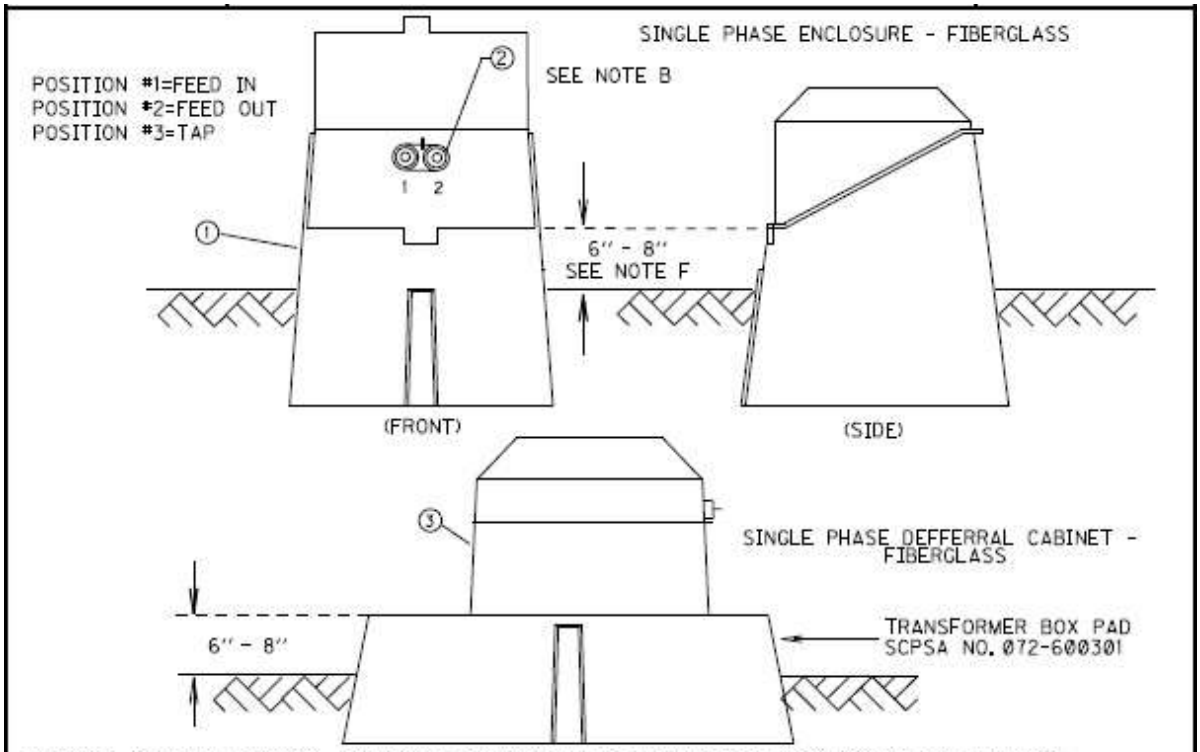
ITEM	QTY.	DESCRIPTION	ITEM ID NO.
—	2	1/2" X 10' SECTIONAL GROUND ROD	073-147263
—	1	BRONZE COUPLING	073-140403
—	1	LOCK, DISPOSABLE	510-466159
—	1	GROUND ROD CLAMP	073-140123
—	AR	#4 CU CONDUCTOR	111-101107
—	3	GROUNDING CONNECTOR	071-140214

REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP
3	1/10	ADDED NOTE F	TLA	TLA	
2	12/03	ADDED NOTE D.	TLA	TLA	JMP
1	3/02	ADDED NOTE G.	TLA	TLA	JMP

THREE PHASE PRIMARY JUNCTION ENCLOSURE - FIBERGLASS

D.ENG	JEC	BY	JEC	APVD	CVS	APVD	

Figure 6 – Single Phase PadMount Cabinet



CAUTION: FEED IN AND OUT DIRECTIONS CANNOT BE ASSUMED TO BE AS INDICATED ON DRAWING. ALL SAFETY PROCEDURES MUST BE FOLLOWED.

NOTES:

A. SINGLE PHASE ENCLOSURE IS TO BE USED WHERE CHANGE OUT TO TRANSFORMER IS NOT ANTICIPATED. DEFERRAL CABINET SHOULD BE USED WHEN CHANGEOUT TO TRANSFORMER IS ANTICIPATED.

C. MAXIMUM NUMBER OF PRIMARY CABLES IS 4.

D. CONDUIT SHOULD STOP A MAXIMUM OF 6" ABOVE THE BOTTOM OF THE ENCLOSURE TO ALLOW FREEDOM OF MOVEMENT TO CABLES.

E. CLEAN AND LUBRICATE THE INSERT INTERFACES AFTER REMOVING THE PROTECTIVE CAPS.

F. MEASUREMENT IS FROM BOTTOM OF LID TO GROUND LINE. ALL BURIAL DEPTH REQUIREMENTS ARE AT FINAL GRADE.

G. REMOVE LIFTING EYES AFTER INSTALLATION.

► H. ENCLOSURE SHALL BE INSTALLED TO MAINTAIN MINIMUM CLEARANCES OF 10' IN THE FRONT AND 3' ON THE BACK AND SIDES FROM ANY WALL, TRANSFORMER, OR OBSTRUCTION.

GROUNDING:

I. CABLE AND ACCESSORIES SHOULD BE BONDED WITH #4 CU CONDUCTOR TO A DRIVEN GROUND ROD.

J. DRIVEN GROUNDS SHOULD BE INSTALLED IN THE ENCLOSURE. CABLES SHOULD BE LOCATED BEFORE DRIVING GROUND RODS TO AVOID DAMAGE.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.	ITEM	QTY.	DESCRIPTION	ITEM ID NO.
1	1	PRIM., JUNCTION ENCL. FBGLS (1 PH.)	550-600312	—	1	BRONZE COUPLING	073-140403
2	1	PORTABLE FEEDTHRU	071-600152	—	1	LOCK, DISPOSABLE	510-466159
				—	1	GROUND ROD CLAMP	073-140123
3	1	DEFERRAL CABINET, FBGLS (1 PH.)	550-600311	—	AR	#4 CU CONDUCTOR	111-101107
				—	2	1/2" X 10' SECTIONAL GROUND ROD	073-147263

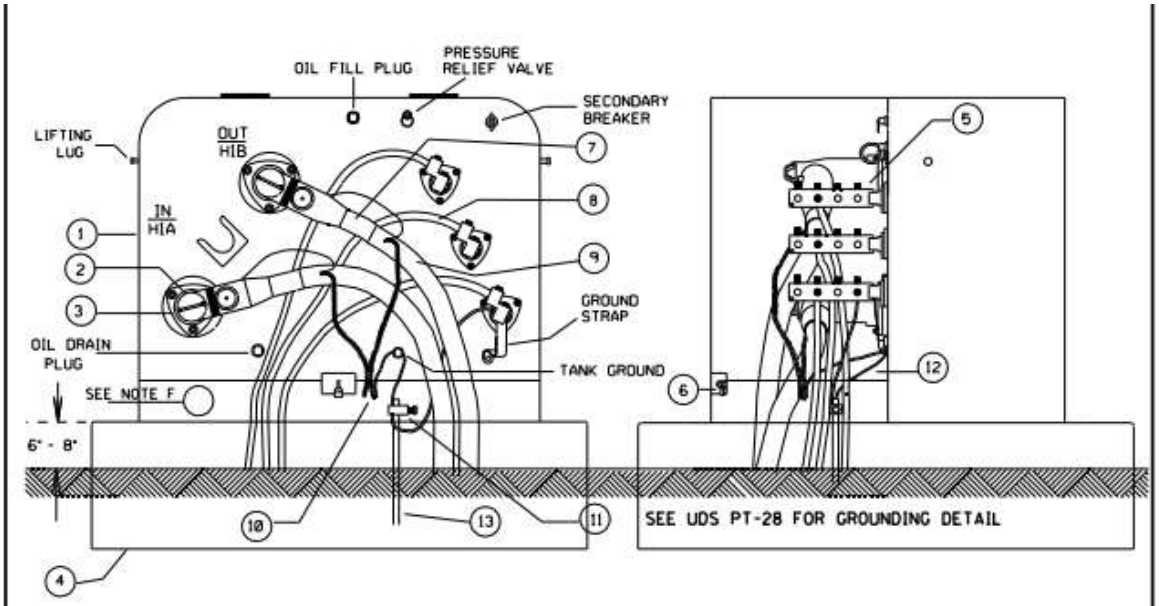
REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP
3	1/10	ADDED NOTE H.	TLA	TLA	·
2	12/03	ADDED NOTE F.	TLA	TLA	JMP
1	3/02	ADDED NOTE H.	TLA	TLA	JMP

SINGLE PHASE PRIMARY

JUNCTION ENCLOSURE – FIBERGLASS

D.ENG JEC | BY JEC | APVD CVS | APVD

Figure 7 – Single Phase PadMount Transformer



CAUTION: FEED IN AND OUT DIRECTIONS CANNOT BE ASSUMED TO BE AS INDICATED ON DRAWING. ALL SAFETY PROCEDURES MUST BE FOLLOWED.

NOTES:

A. LOCATION OF OIL PLUGS, PRESSURE RELIEF VALVE MAY CHANGE SLIGHTLY DEPENDING ON THE MANUFACTURER.
B. VENT PRESSURE RELIEF DEVICE TO EQUALIZE PRESSURE INSIDE TANK BEFORE REMOVING FUSE ON TANKS WITH BAY-O-NET FUSES.
C. MAKE CERTAIN OF CABLE LOCATIONS BEFORE INSTALLING GROUND RODS TO AVOID DAMAGE TO CABLES.
► D. FIBERGLASS PAD HAS THREADED INSERTS. THE FOLLOWING IS REQUIRED TO ANCHOR THE TRANSFORMER TO THE PAD:
2 - STAINLESS STEEL 3/8" X 1-1/2" BOLTS #310-181493
2 - STAINLESS STEEL 3/8" FENDER WASHERS #312-181936
E. INSTALL GROUND ROD INSIDE BOX PAD OPENING.
F. FAULT INDICATORS SHOULD BE MOUNTED AS SPECIFIED BY ENGINEER.
G. USE EXTENDED BUSHING INSERT, ITEM ID 071-600145, WHEN TWO OR MORE RUNS OF 500 MCM SECONDARY ARE ANTICIPATED.
H. FOR MULTI-FAMILY AND LARGE RESIDENTIAL WHERE 500 MCM SECONDARY IS USED, LARGE SECONDARY CONNECTORS, ITEM ID 071-600123, SHOULD BE ISSUED.
I. REMOVE LIFTING LUGS AFTER INSTALLATION.
J. ALL BURIAL DEPTHS ARE AT FINAL GRADE.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.	ITEM	QTY.	DESCRIPTION	ITEM ID NO.
1	1	TRANSFORMER	AS REQ.	8	—	600 V SECONDARY CABLE	AS REQ.
2	2	15 kV LOADBREAK ELBOW	071-600138	9	—	15 KV 1/0 XLPE PRIMARY CABLE	113-600010
3	2	15 kV BUSHING INSERT (SEE NOTE G)	AS REQ.	10	2	CRIMPIT (SEE SMC DI-133)	AS REQ.
4	1	FIBERGLASS BOX PAD (SEE NOTE D)	072-600301	11	1	GROUND ROD CLAMP	073-140123
5	3	Z-BAR SECONDARY CONN (SEE NOTE H)	AS REQ.	12	—	#4 CU CONDUCTOR	111-101107
6	1	DISPOSABLE LOCK	510-466159	13	2	1/2"X 10' SECTIONAL GROUND ROD	073-147263
7	2	SEALING KIT 1/0 15KV URD	072-600390		1	BRONZE COUPLING	073-140403

REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP
4	6/09	ADDED Z-BARS, REVISED NOTE D	TLA	TLA	GAT
3	12/03	ADDED NOTE J	TLA	TLA	JMP
2	3/02	ADDED NOTE I	TLA	TLA	JMP
1	1/98	ADDED NOTES G, H	RF	RF	JEC

SINGLE PHASE PADMOUNT TRANSFORMER CONNECTIONS 7.2/12.47 kV

D.ENG JEC | BY JEC | APVD SCB | APVD HTL

► REVISION

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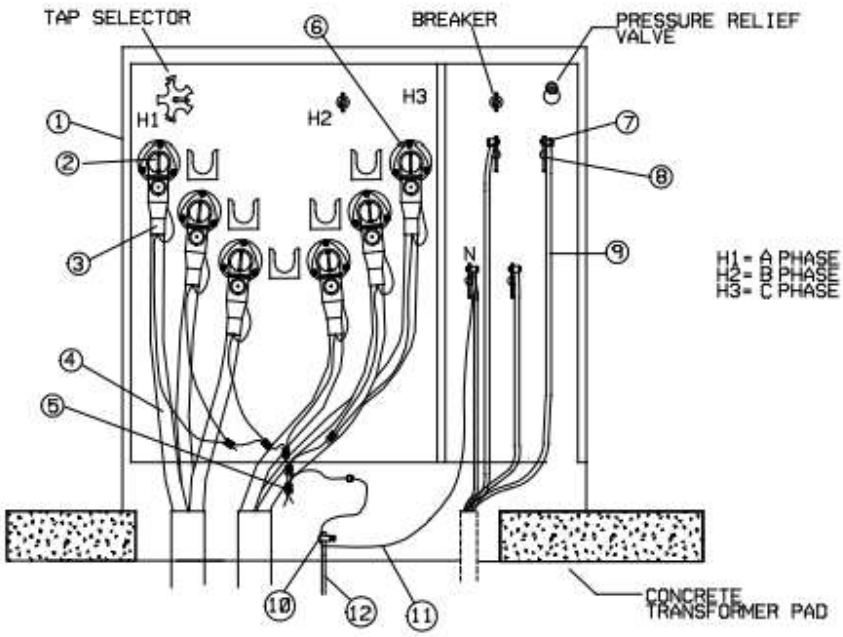
Figure 8 – 3 Phase PadMount Transformer



NOTES:

A. PRIMARY CABLE SHOULD HAVE A SLIGHT "BOW" IN FINAL ASSEMBLED POSITION.
B. ALLOW SUFFICIENT LENGTH OF NEUTRAL TO PERMIT FREE MOVEMENT TO ELBOWS.
C. MAKE SURE OF CABLE LOCATIONS BEFORE DRIVING GROUND RODS TO AVOID DAMAGE TO CABLES.
D. INSTALL GROUND ROD INSIDE PAD OPENING.
E. SECONDARY MAY NOT ALWAYS BE IN CONDUIT.
F. LOCATION OF PRESSURE RELIEF VALVE, TAP SELECTOR AND BREAKER MAY VARY SLIGHTLY DEPENDING ON THE MANUFACTURER.
G. ELBOWS SHOULD ALWAYS BE TREATED AS LIVE PARTS, INSTALLED AND REMOVED ONLY WITH A SHOTGUN STICK.
H. GROUND AS SHOWN.

ITEM	QTY.	TRANSFORMER DESCRIPTION	ITEM REQ NO.	ITEM	QTY.	600V SECONDARY DESCRIPTION	ITEM REQ NO.
2	6	LOADBREAK ELBOW 15 OR 34kV	AS REQ.	10	2	GROUND ROD CLAMP	073-140123
3	6	SEALING KIT 1/0 15 OR 34kV URD	AS REQ.	11	---	#4 CU CONDUCTOR	111-101107
4	---	PRIMARY CABLE 1/0 15 OR 34kV	AS REQ.	12	2	½" X 10' SECTIONAL GROUND ROD	073-147263
5	6	CRIMPIT (SEE SMC DI-133)	AS REQ.		1	BRONZE COUPLING	073-140403
6	6	BUSHING WELL INSERT 15 OR 34kV	AS REQ.		1	LOCK	510-466164
7	---	SECONDARY CONNECTORS	AS REQ.				
8	4	SECONDARY SPADE CONNECTORS	AS REQ.				

THREE PHASE LOOP - DEADFRONT
PADMOUNT (LOOP FEED) TRANSFORMER
12470 VOLTS OVER 750 KVA AND
ALL 34500 VOLTS

REV	DATE	DESCRIPTION	BY	D.ENG	D.SUP	D.ENG REF	BY REF	APVD WMJ	APVD

dist/uds/pt-064.dgn

Figure 9 – Secondary Enclosure

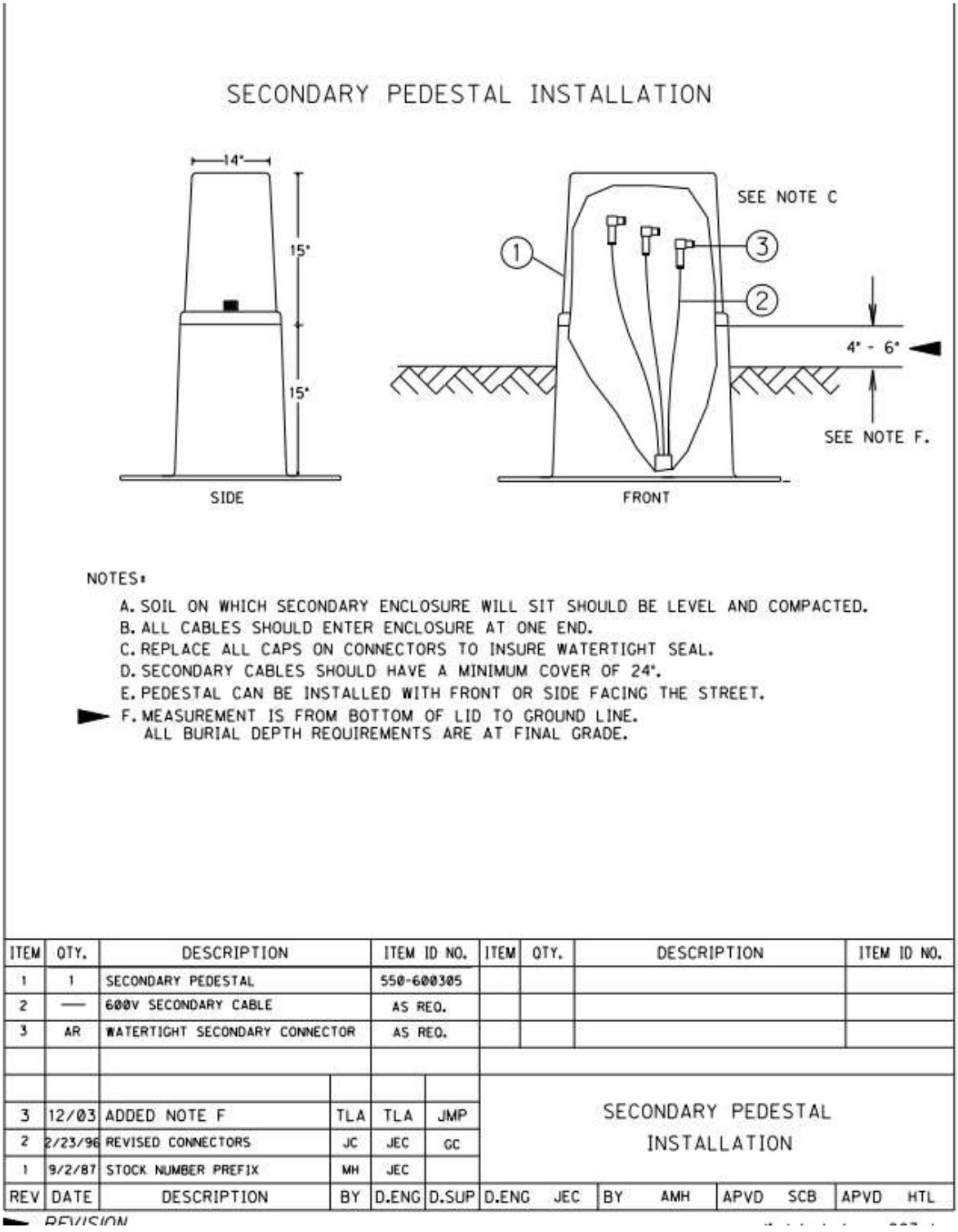
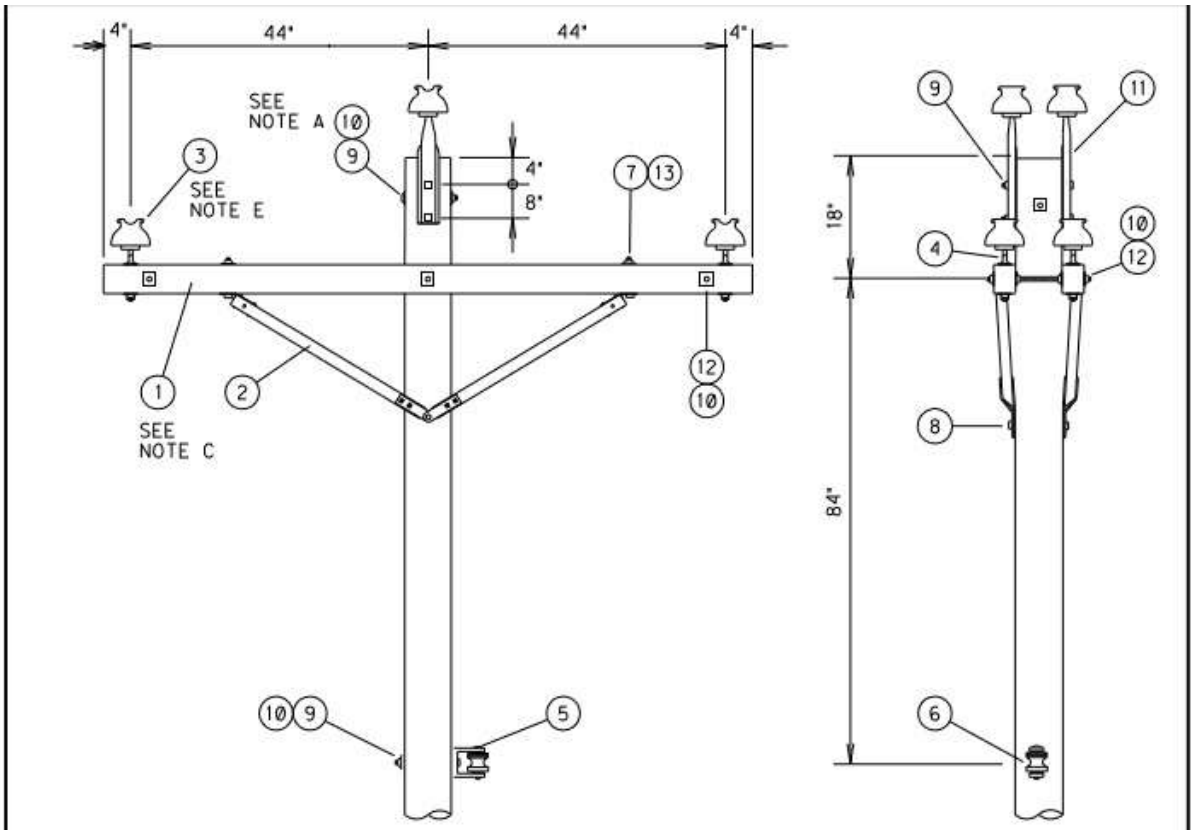


Figure 10 – Install 7 tangent 3-Phase AN neutral line structures

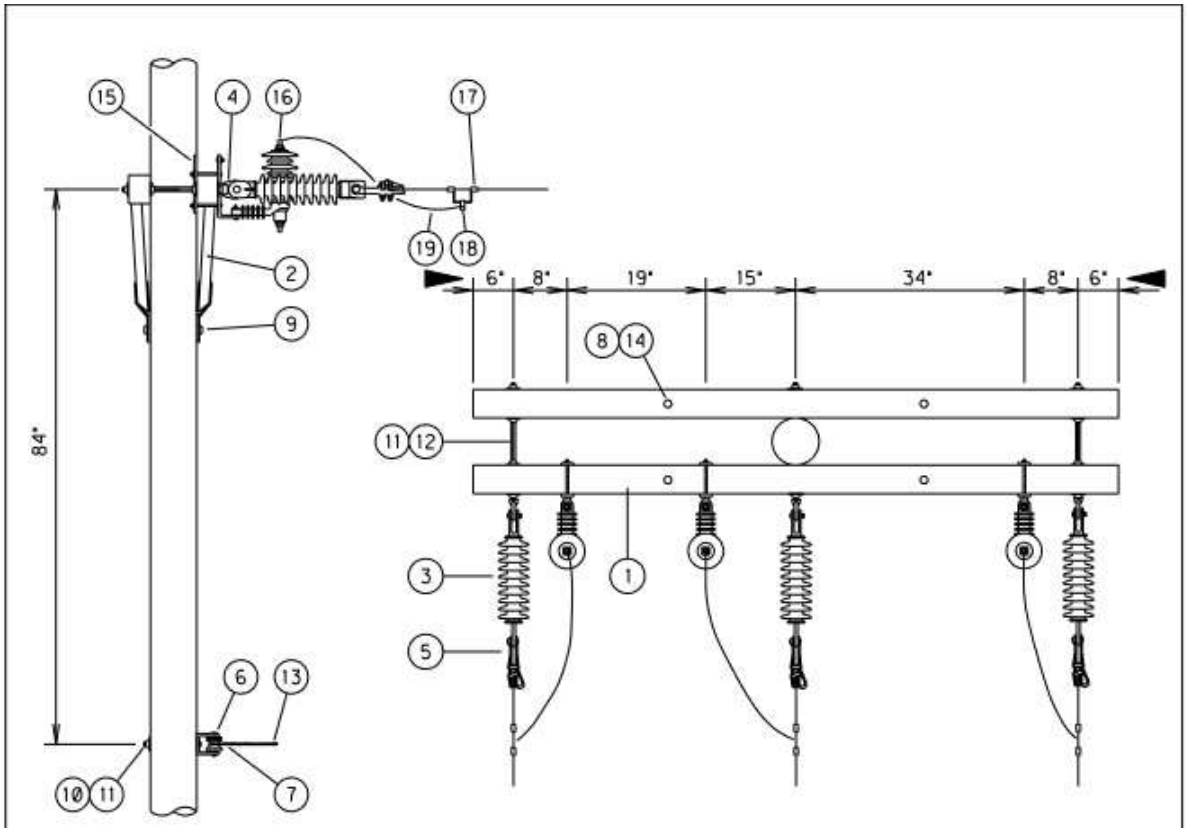


NOTES:

A. SPLIT BOLT CONSISTS OF ONE 5/8" MACHINE BOLT AND TWO 2" SQ. WASHERS
B. ENGINEER TO SPECIFY GUYING.
C. FOR HEAVY LOADS USE 4 3/4" x 5 3/4" x 8' CROSSARM NO. 562-203125 AS REQUIRED.
D. GROUNDING DETAILS CAN BE FOUND IN THE GROUNDING SECTION OF THIS MANUAL.
► E. IN COASTAL AREAS USE INSULATOR Ø22-220125

ITEM	QTY.	DESCRIPTION	ITEM ID NO.	ITEM	QTY.	DESCRIPTION	ITEM ID NO.
1	2	CROSSARM, 4" x 5" x 8'	562-203119	9	4	BOLT, MCH. 5/8" x REQ'D	———
2	4	BRACE, WOOD CA 60"	563-209104	10	13	WASHER 2" SQ. 11/16" HOLE	Ø70-181964
3	6	INSULATOR, PIN TYPE	Ø22-220134	11	2	PIN, STEEL POLE TOP	Ø72-185252
4	4	PIN, STEEL INS. 5/8" x 6 1/2"	Ø72-185224	12	3	BOLT, D.A. 5/8" x REQ'D.	———
5	1	CLEVIS, SEC.	Ø71-229174	13	4	WASHER, 2" SQ. 9/16" HOLE	Ø70-181961
6	1	INSULATOR, SEC. SPOOL	Ø23-225102				
7	4	BOLT, MCH. 1/2" x 7"	Ø70-181436				
8	2	SCREW, LAG 1/2" x 4 1/2"	Ø70-181866	GROUNDING MATERIAL - SEE GROUNDING SECTION			

Figure 11 – Install 6 3-Phase dead end structures



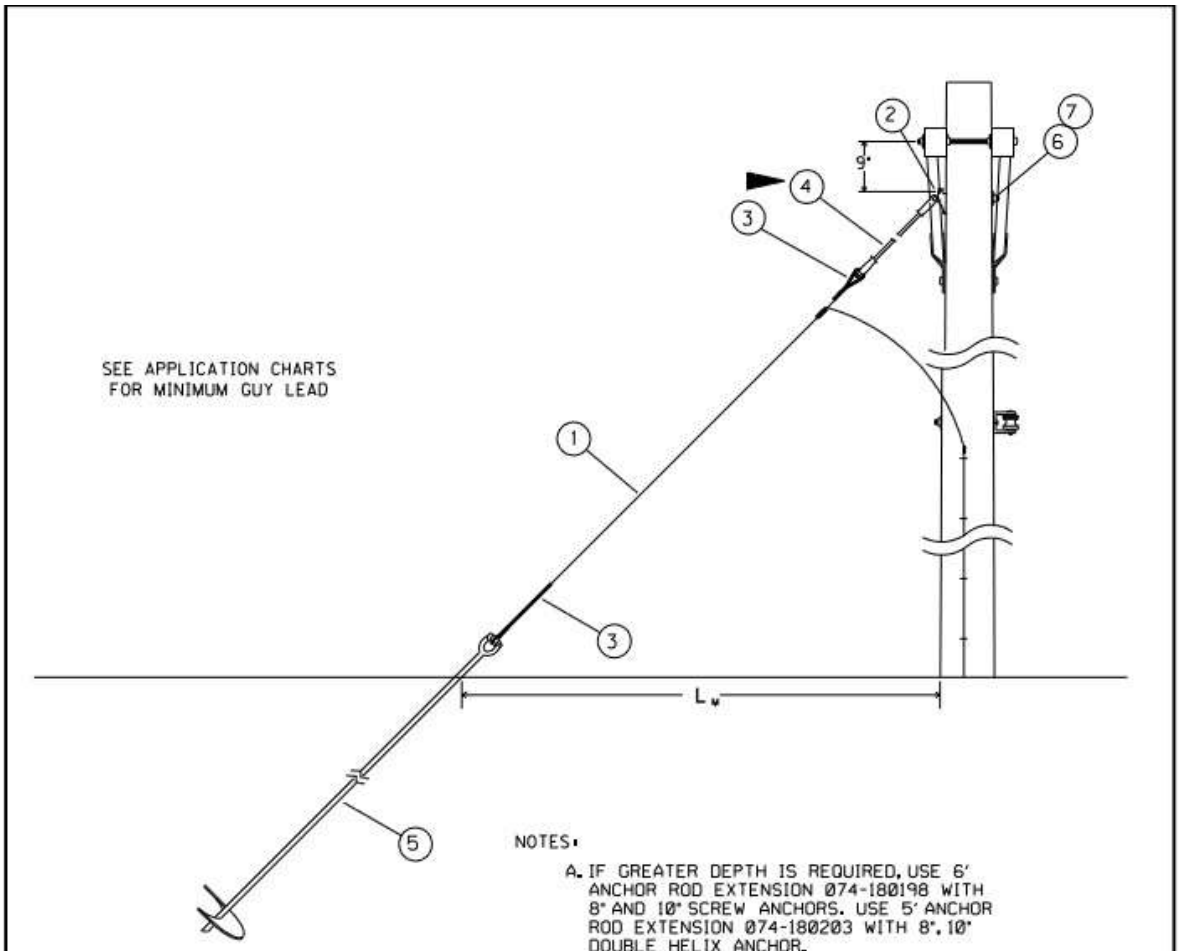
NOTES:

A. DISTANCE FROM CROSSARM BOLT TO BOTTOM TRANSMISSION BOLT SHALL BE:
12' FOR HP (HORIZONTAL POST) TYPE STRUCTURES
15' FOR VCSA, VCLA (VERTICAL CONSTRUCTION SMALL ANGLE, LARGE ANGLE) TYPE STRUCTURES
13' FOR DEA (VERTICAL DEADEND, 45 -90)

B. THIS REPRESENTS BASIC FRAMING DETAIL, DISTRIBUTION DESIGN TO SPECIFY GUYING, GROUNDING, AND OTHER DETAILS.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.	ITEM	QTY.	DESCRIPTION	ITEM ID NO.
►1	2	CROSSARM 4¾" × 5¾" × 8'	562-203125	11	11	WASHER 2" SQ. 11/16 " HOLE	070-181964
2	4	BRACE, WOOD CA 60"	563-209104	12	3	BOLT, D.A. 5/8" × REQ'D	———
3	3	INSULATOR, SUSPENSION	025-223129	13	1	AUTO D.E., AS REQ'D	———
4	3	NUT, EYE 5/8"	070-181792	14	4	WASHER 2" SQ. 9/16" HOLE	070-181961
5	3	CLAMP, D.E. STRAIN (AS REQ'D)	———	15	3	BRACKET X-ARM MTG. F/CUTOUT	060-283109
6	1	CLEVIS, SEC.	071-229174	16	3	ARR. LIGHTNING 10KV MO	060-281104
7	1	INSULATOR, SEC. SPOOL	023-225102	17	3	STIRRUP, AS REQD.	———
8	4	BOLT, MCH. 1/2" × 7"	070-181436	18	3	CLAMP, HOTLINE 8-1/0	071-140121
9	2	SCREW, LAG 1/2" × 4 1/2"	070-181866	19	3	WIRE, #4 SD BARE CU SOLID	111-101107
10	1	BOLT, MCH. 5/8" × REQ'D	———	GROUNDING MATERIAL - SEE GROUNDING SECTION			

Figure 12 – Install 6 down guys and anchors for DE structures



NOTES:

A. IF GREATER DEPTH IS REQUIRED, USE 6' ANCHOR ROD EXTENSION Ø74-180198 WITH 8" AND 10" SCREW ANCHORS. USE 5' ANCHOR ROD EXTENSION 074-180203 WITH 8", 10" DOUBLE HELIX ANCHOR.

B. DESIGN TENSION IN 7#8 ALUMOWELD GUY WIRE SHOULD NOT EXCEED 14,300 LBS.

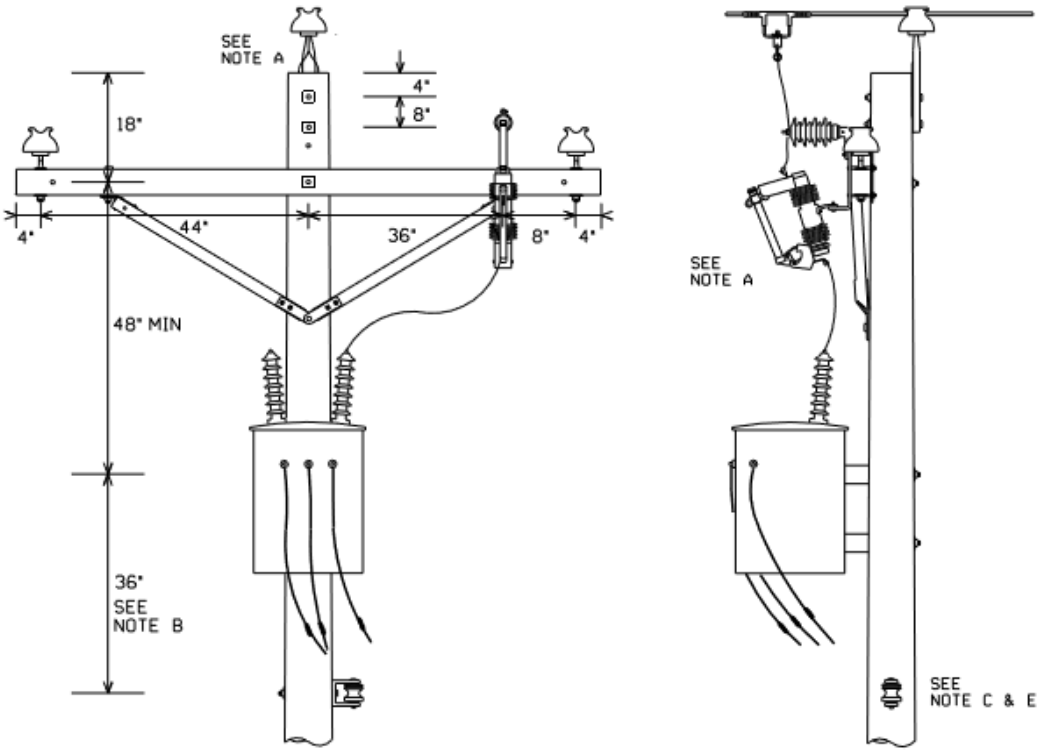
GROUNDING

C. ALL GUYS WILL BE BONDED TO THE POLE GROUND TO MEET THE REQUIREMENTS OF THE NESC. GUY STRAIN INSULATORS ARE INSTALLED AT THE POLE FOR LINEMAN'S SAFETY.

D. GROUNDING DETAILS CAN BE FOUND IN THE GROUNDING SECTION OF THIS MANUAL.

ITEM	QTY.	DESCRIPTION	ITEM ID NO.	ITEM	QTY.	DESCRIPTION	ITEM ID NO.
1	AR	WIRE, GUY 7#8 ALUMOWELD	115-124155	6	1	BOLT, MCH, 5/8"X REQ'D	———
2	1	GUY ATTACHMENT, COMBO. TYPE	Ø74-184106	7	1	WASHER 2" SQ. 11/16" HOLE	Ø70-181964
3	2	DEAD END GUY GRIP	Ø74-189315		1	GUY GUARD, PLASTIC 7'	Ø74-189313
4	1	INS. GUY STRAIN FG, 78", 21K	Ø24-223178				
5	1	ANCHOR, SCREW	SEE G-2E	GROUNDING MATERIAL - SEE GROUNDING SECTION			

Figure 13 - Install 4-10 KVA Transformers – 4 small cutout switches with arrestors



NOTES:

A. IN COASTAL AREAS USE CUTOUT 060-283055, AND INSULATOR 022-220125.

B. THIS DIMENSION MAY BE DECREASED IF EXTRA GROUND CLEARANCE IS NEEDED TO 10" BELOW BOTTOM OF TRANSFORMER.

C. SECONDARY SPOOL IS MOUNTED A MINIMUM OF 12" BELOW NEUTRAL SPOOL WHEN SECONDARY CABLE RUNS PARALLEL TO NEUTRAL.

D. GROUNDING DETAILS CAN BE FOUND IN THE GROUNDING SECTION OF THIS MANUAL.

E. SEE COMPOSITE SECTION FOR SERVICE CABLE DETAILS.

13	6-13	CORRECT PART# NOTE A	TLA	TLA		SINGLE PHASE TRANSFORMER TRIANGULAR SPACING
12	7-03	POLY INSULATOR CHG	KT	JEC	SER	
11	01-96	ADDED POLYMER ARRESTER AND REMOVED B.O.M.	RJ	JEC	GC	
10	06-94	MOVED CABELOKS BELOW TRANSFORMER	LN	SL	GC	

Table 1- URD Conduit Specifications

3 PHASE OPTION 1	3 PHASE OPTION 2	SINGLE PHASE	2 INCH TOTAL
4 INCH CONDUIT	2 INCH CONDUIT	2 INCH CONDUIT	
420	1260	320	1580
ALL CONDUIT IN FEET			

Table 2 - Terminal Specifications

TERMINATIONS ALL EQUIPMENT		
P1	OH Terminator	3
P2	OH Terminator	3
P3	OH Terminator	3
	Total	9
S1	LB Elbow	6
T1	LB Elbow	6
T2	LB Elbow	6
T3	LB Elbow	6
T4	LB Elbow	6
T5	LB Elbow	2
T6	LB Elbow	2
T7	LB Elbow	2
T8	LB Elbow	2
T9	LB Elbow	2
T10	LB Elbow	2
T11	LB Elbow	2
	Total	44
T5	Z Bar	3
T6	Z Bar	3
T7	Z Bar	3
T8	Z Bar	3
T9	Z Bar	3
T10	Z Bar	3
T11	Z Bar	3

	Total	21
T5	Bushing Insert	2
T6	Bushing Insert	2
T7	Bushing Insert	2
T8	Bushing Insert	2
T9	Bushing Insert	2
T10	Bushing Insert	2
T11	Bushing Insert	2
	Total	14
T5	Disposable lock	1
T6	Disposable lock	1
T7	Disposable lock	1
T8	Disposable lock	1
T9	Disposable lock	1
T10	Disposable lock	1
T11	Disposable lock	1
	Total	7
T5	Sealing kit	2
T6	Sealing kit	2
T7	Sealing kit	2
T8	Sealing kit	2
T9	Sealing kit	2
T10	Sealing kit	2
T11	Sealing kit	2
	Total	14
T5	Crimpit	2
T6	Crimpit	2
T7	Crimpit	2
T8	Crimpit	2
T9	Crimpit	2
T10	Crimpit	2
T11	Crimpit	2
	Total	14
T5	Ground rod clamp	1

T6	Ground rod clamp	1
T7	Ground rod clamp	1
T8	Ground rod clamp	1
T9	Ground rod clamp	1
T10	Ground rod clamp	1
T11	Ground rod clamp	1
	Total	7
T5	Sectional ground rod	2
T6	Sectional ground rod	2
T7	Sectional ground rod	2
T8	Sectional ground rod	2
T9	Sectional ground rod	2
T10	Sectional ground rod	2
T11	Sectional ground rod	2
	Total	14
T5	Bronze coupling	1
T6	Bronze coupling	1
T7	Bronze coupling	1
T8	Bronze coupling	1
T9	Bronze coupling	1
T10	Bronze coupling	1
T11	Bronze coupling	1
	Total	7
HH1	WT connector	3
HH2	WT connector	3
HH3	WT connector	3
	Total	9

Table 3 - URD Equipment List

2X2 15KV SWITCHGEAR	1
SWITCHGEAR PAD	1
3 PHASE ENCLOSURE (3PC 1 AND 3PC2)	2
3 PHASE ENCLOSURE	2
JUNCTION 200A 4WAY	6
1/2"x10' SECTINAL GROUND ROD	4
GROUND ROD CUOUPLING	2
LOCK	2
GROUND ROD CLAMP	2
CASE GROUND CONNECTOR	6
SINGLE PHASE PADMONUT CABINET (1PE)	1
SINGLE PHASE PAD	1
PRIMARY JUNCTION 4-WAY	1
FEED THRU BUSHING	1
1/2"x10' SECTIONAL GROUND ROD	1
GROUND ROD COUPLING	1
LOCK	1
GROUND ROD CLAMP	1
CASE GROUND CONNECTOR	1
3 PHASE PADMOUNT TRANSFORMER (3PT1 AND 3PT2	2
LOADBREAK ELBOW 15KV 2001	12
1/0 15KV SEALING KIT	12
COPPER CRIMP	6
BUSHING WELL INSER 15KV 200A	12
SECONDARY Z-BARR CONNECTOR	8
1/2"x10' SECTINAL GROUND ROD	4
GROUND ROD COUUPLING	4
LOCK	2
GROUND ROD CLAMP	2
CASE GROUND CONNECTOR	2
SEONDARY ENCLOSURE	3
WATERTIGHT 4 WAY SECONDARY CONNECTOR	9
SINGLE PHASE PADMOUNT TRANSFORMER	
TRANSFORMER 12470/7200 240/120	6

15KV LOADBREAK ELBOW	12
FIBERGLASS BOX PAD	6
LOCK	6
15KV SEALING KIT	12
1/2"x10' SECTINAL GROUND ROD	12
GROUND ROD CUOUPLING	6
LOCK	6
GROUND ROD CLAMP	6
CASE GROUND CONNECTOR	6
1/2"x 10' sectional ground rodbronze coupling	12
BRONZE COUPLING	6