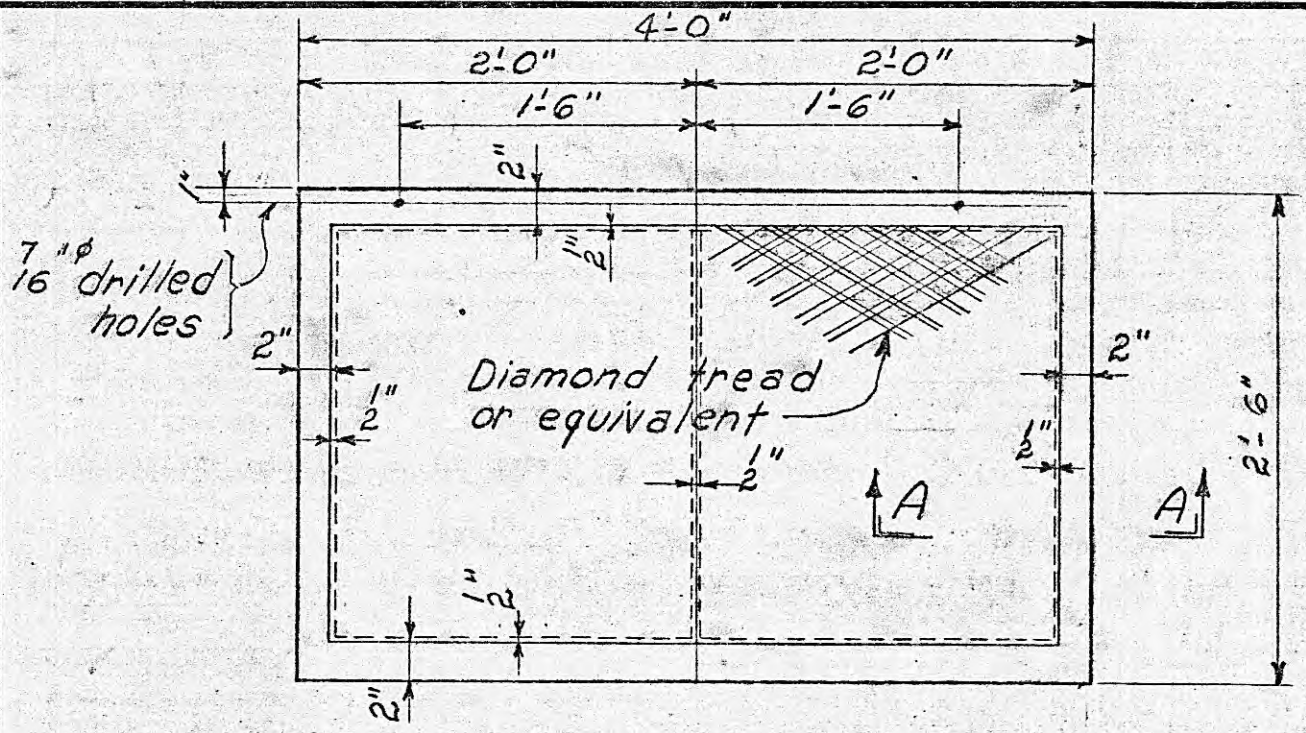
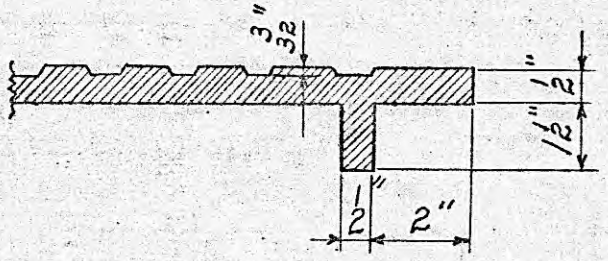
SC-3956



PLAN



SECTION A-A

NOTE:-

Plate shall be set on the graded ground.
Paint one shop coat of oil alkyd rust inhibitive primer.
Material shall be grey cast iron per ASTM A-48 class 30.

Approx. weight, 210#

Rev. No.	DATE	DSGN	DRWN	CHKD	SUPV	APPD
9	9-16-81	WHF	WSC	WSC	HWH	
	Removed red lead and linseed oil.					
8	1-3-66		P.M.	RWR	RWR	WGT
	TRACED					

DSGN. D.F. SUPV.
DRWN. D.F. W.O.
CHKD. W.W.R. PROJ. ENGR.

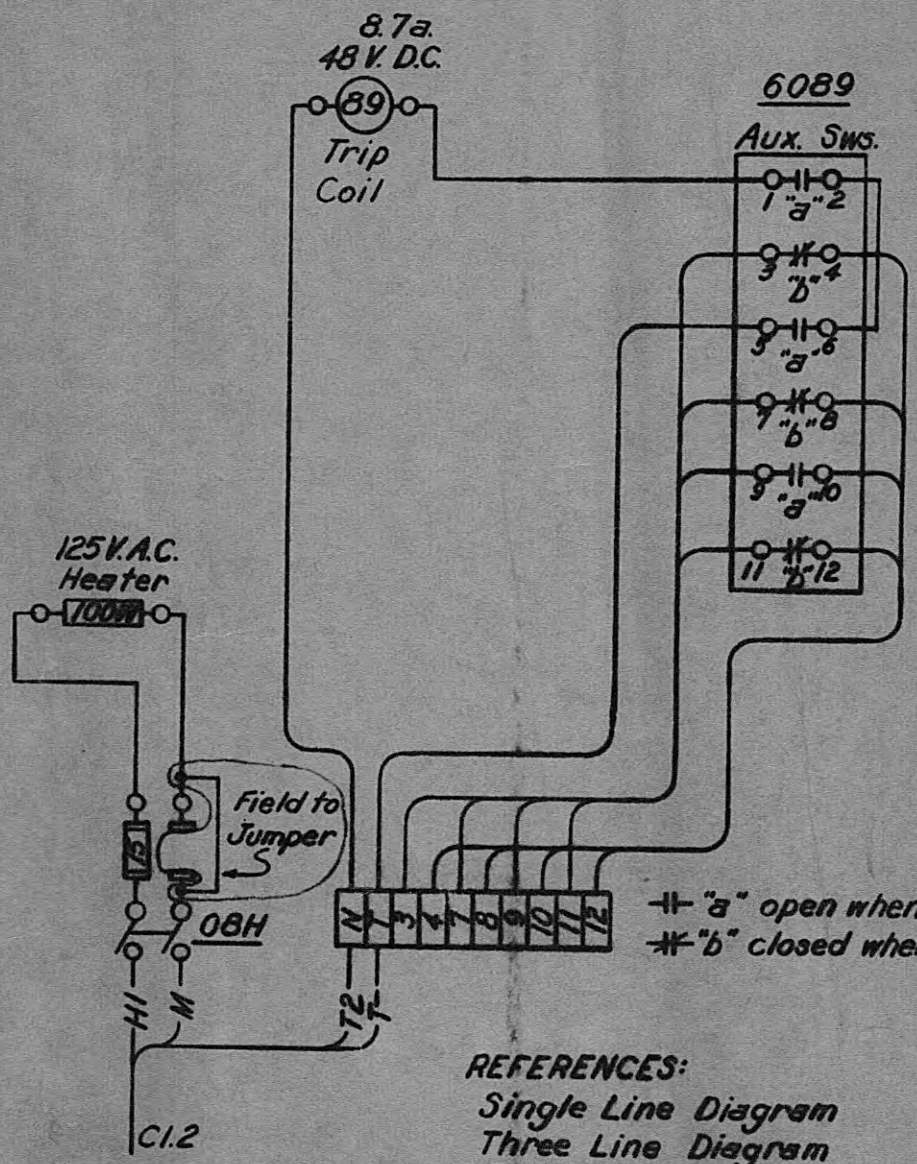
TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING

SUBSTATIONS GENERAL
GROUNDED PLATFORM PLATE
DETAIL FOR AIR BREAK SWITCH CONTROL

DATE 6-6-37 | SUBMITTED 1-7-66 R.T. Connelly | APPROVED E.J. Reuss | SHEET 1 OF 1 SHEETS
SCALE 1"=3" | CLASS. CODE 15 206 0 | SC-3956

5

7094-SM



REFERENCES:

Single Line Diagram	WL-4545
Three Line Diagram	WL-4587
Elem. Diagram	WL-4588
Conduit Plan & Details	LC-49979
Conduit & Cable List	CMC-49981
Mfr's Dwg's.	XA-2033
Mfr's Wiring Diagram	23-122-310-001

Norris-Rockwood-69KV.	607	6089	6000
LOCATION	SW. NO.	DEV. NO.	DEV. SER.

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING

N.E. HARRIMAN, TENN., SUB. 69 KV.
CONTROL DIAG. FOR ALLIS-CHALMERS "TA-1B", 69KV., 600A, DISC. SW. WITH "CHA" SPRING MECH.

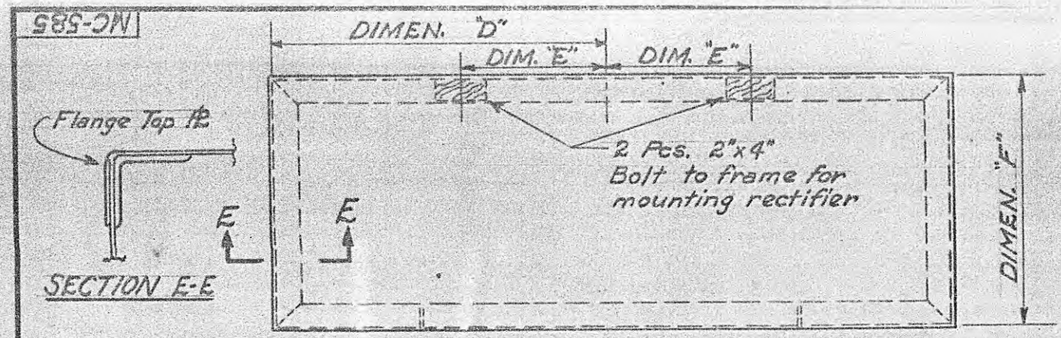
REV NO	DATE	DSGN	DRWN	CHKD	SUPV	APPD
1	Jumpered Grd. Circuit Fuse					
	6/6/69	JGG	MFA	JGG		

DSGN. LMG
DRWN MFA
CHKD. JGG
SUPV.
W.O. 37174
PROJ. ENGR.

DATE 6/6/69 | SUBMITTED Henry L. Hunter | APPROVED Robert C. Stokes | SHEET 1 OF 1 SHEETS
SCALE None | CLASS CODE D338A | WS-4602

Original Issue

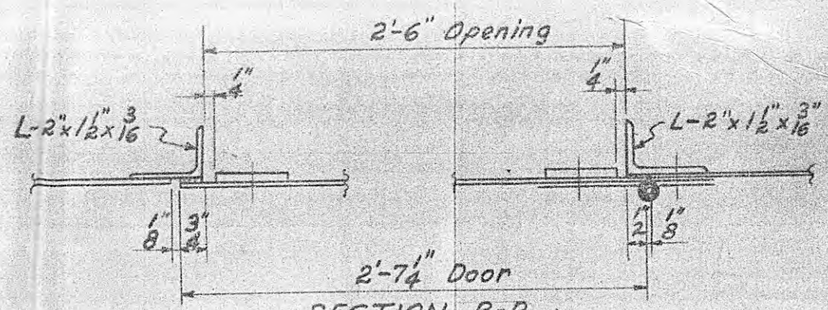
MC-585



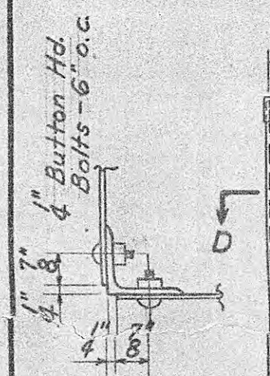
SECTION E-E

TOP

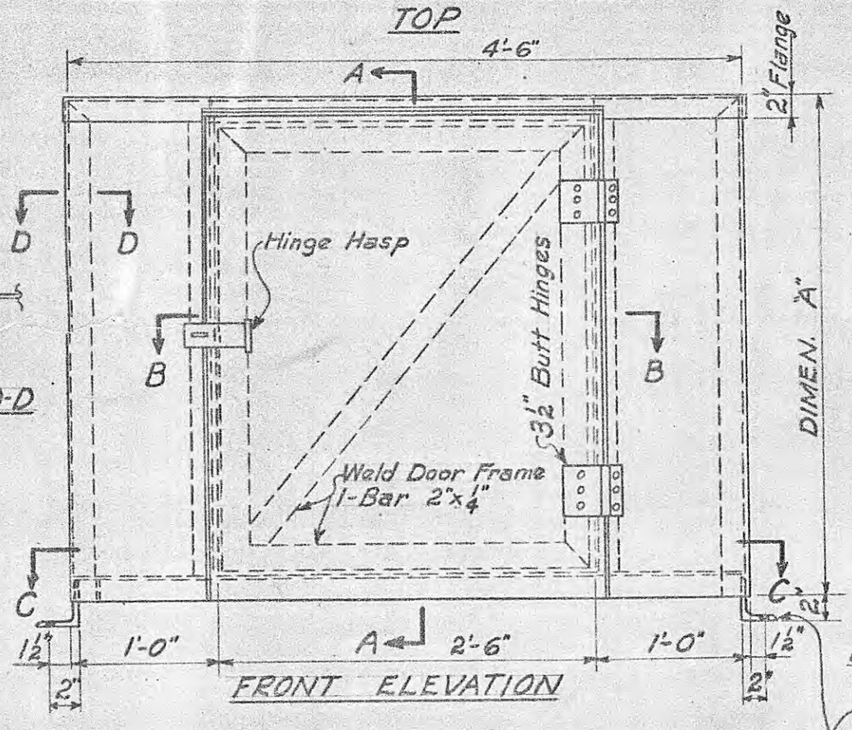
SECTION F-F
Thru Louvre

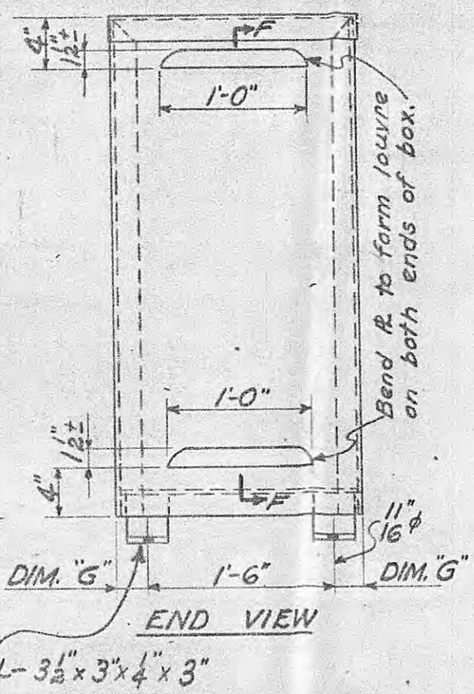


SECTION B-B
Thru Door

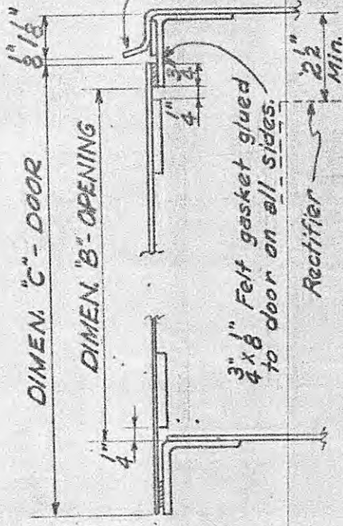


SECTION D-D





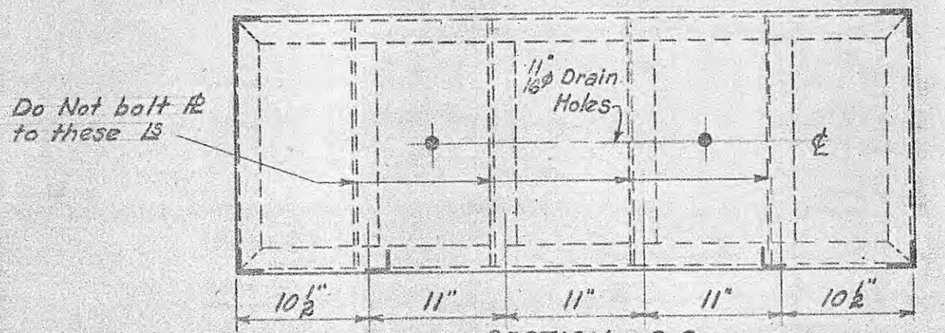
END VIEW



SECTION A-A
Thru Door

NOTES:

All ∠s 2"x2"x3/16, or noted.
Plating No.16 ga. steel.
Frame to be welded complete & plating to be bolted with ¼" Button Hd. Bolts spaced abt. 6" o.c.
Contact areas to be painted with red lead paint and linseed oil before assembling.
Inside of box to be coated with acid resisting paint.
Outside of box to be painted with aluminum paint.



SECTION C-C

FIG. NO.	A	B	C	D	E	F	G
3	4'-4"	4'-0"	4'-2¾"	2'-3"	1'-2¼"	2'-3"	0'-4½"
2	4'-4"	4'-0"	4'-2¾"	2'-3"	1'-2¼"	1'-11"	0'-2½"
1	3'-4"	3'-0"	3'-2¾"	1'-1"	0'-4	1'-11"	0'-2½"

REV. NO.	DATE	DSGN.	DRWN.	CHKD.	SUPV.	APPD.
4	10-21-67		PM			RE

REDRAWN

DSGN. ____ SUPV. ____
DRWN. JHS W.O. ____
CHKD. ____ PROJ. ENGR. ____

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING

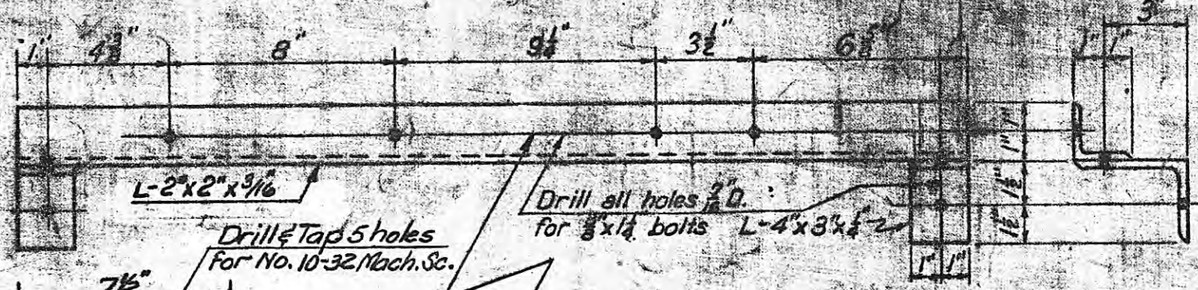
SUBSTATIONS GENERAL
BOX FOR BATTERY AND RECTIFIER

DATE 8-5-35 | SUBMITTED E M Gentle | APPROVED Hornbeck | SHEET OF SHEETS
SCALE NONE | CLASS. CODE | MC-585

Copy 2 of 3

R4

W-622E-3M

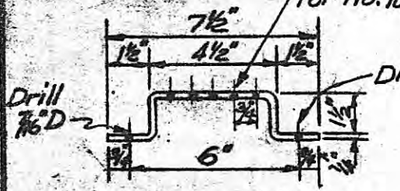


ASSEMBLY-A

Ltg. Assembly on 13 Kv. Bus & Switch Str. Types B, D & E drilled as shown

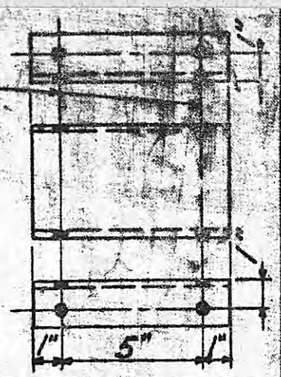
ASSEMBLY-B

Field to drill to suit



ASSEMBLY-K

Copper Bus Bar
1/4" x 1" x 11 1/4" long

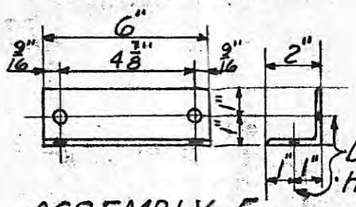


ASSEMBLY J

4" L @ 5.4# x 0'-7" long
For mtg. light bracket on concrete, bus support & Tert. Str. in 500 Kv. Yard.

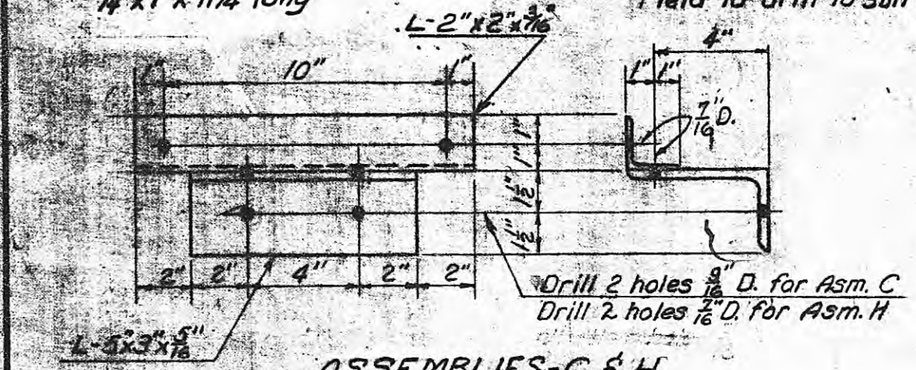
ASSEMBLY-E

L-4"x3"x1/4" x 0'-2" long
For mtg. 6"x6"x4" box at Transf. Bank



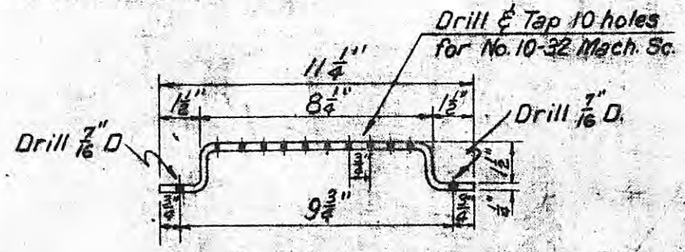
ASSEMBLY-F

L-2"x2"x3/16"x0'-6" long
For Mtg. 100 Amp. plug outlet at hoist tower



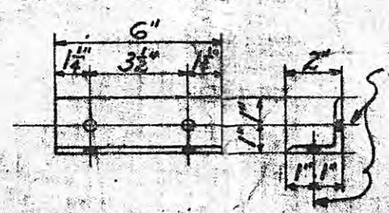
ASSEMBLIES-C & H

Mtg. for 24"x24"x10" Boxes on 13 Kv. Bus & Sw. Str. Types B, D & E



ASSEMBLY-D

Copper Bus Bar
1/4" x 1" x 1'-3" long



ASSEMBLY-G

L-2"x2"x3/16"x0'-6" long
For Mtg. 60 amp. Plug outlet at hoist tower.

MATERIAL REQUIRED FOR ONE BRACKET

ASM.	NO. REQD.	DESCRIPTION	LF FT.	LF IN.	WT. EA.
A & B	1	L 2"x2"x3/16"	2	6	3
	2	L 4"x3"x1/4"	0	2	2
	4	3/8" Mach. Bolt, Galv.	0	1	1
C	1	L 2"x2"x3/16"	1	0	2
	1	L 5"x3"x5/16"	0	8	6
	2	3/8" Mach. Bolt, Galv.	0	1	1
	2	3/8 Mach. Bolt, Galv.	0	3	
D	1	Copper Bus Bar 1/4"x1"	1	3	2
	2	Everdur Bolt & Nut	0	1	1
	10	No. 10-32 Mach. Sc.	0	1	
E	1	L 4"x3"x1/4"	0	2	2
F	1	L 2"x2"x3/16"	0	6	1
G	1	L 2"x2"x3/16"	0	6	1
H	1	L 2"x2"x3/16"	1	0	3
	1	L 5"x3"x5/16"	0	8	6
	4	3/8" Mach. Bolt, Galv.	0	1	
J	2	4" L @ 5.4#	0	7	3.1
	4	3/8" Mach. Bolt, Galv.		1	
K	1	Copper Bus Bar	0	11	4.9
	2	3/8"x1" Everdur Bolt & Nut	0	1	
	5	No. 10-32 Mach. Sc.	0	1	

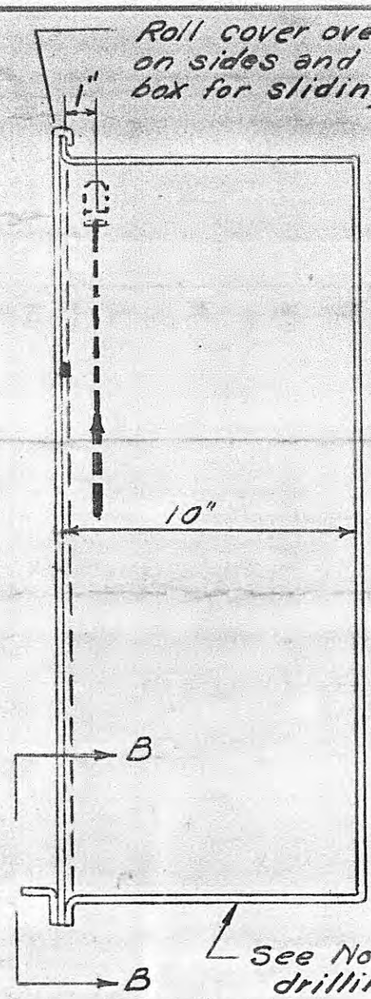
Note:
All steel material to be hot-dipped galvanized after fabrication.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV.	SUBM
Added Assembly K						
5	Finish		SS	REH		
Added Assembly J						
4	5/12/55		ACK	ACK		
Added Assembly H						
3	12-6-54	GFZ	HLP	GFZ		
Added Assembly G						
2	9/16/54		CKS	GFZ	RE	
Added Assembly F						
1	9/1/54		ACK	EBA		

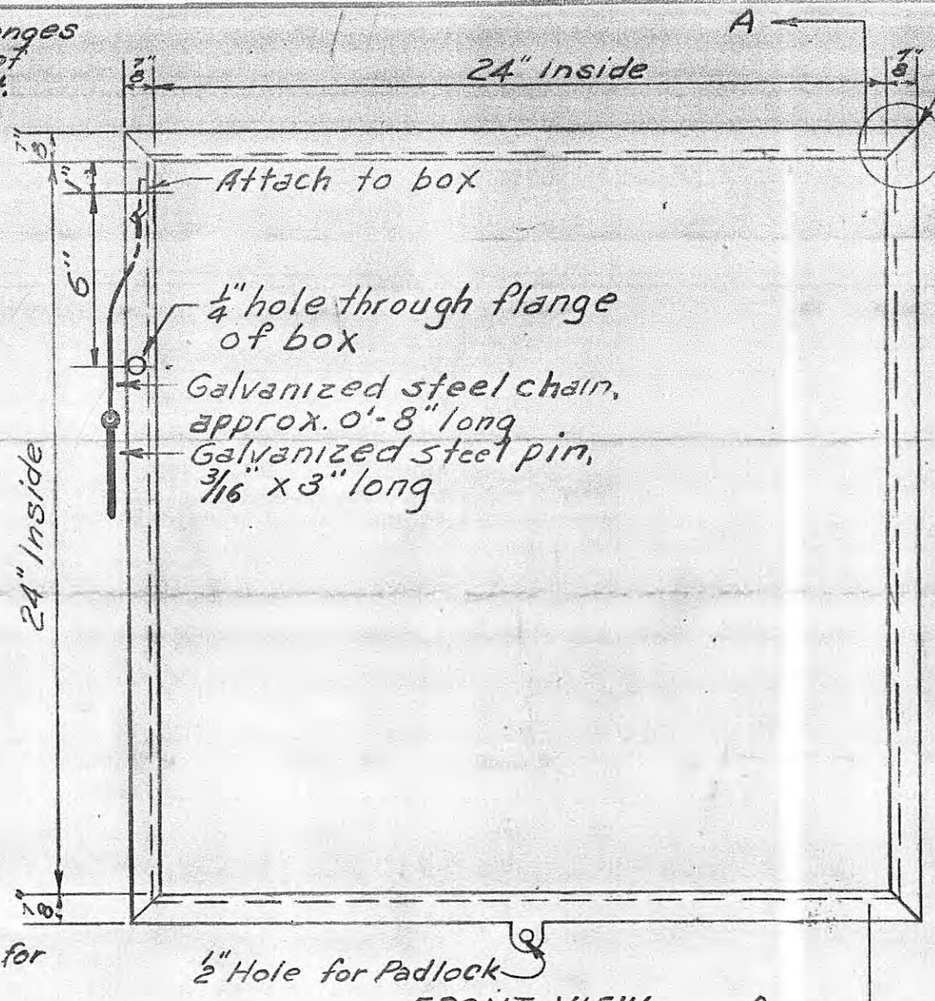
DSGN
DRWN H.L.P
CHKD E.B.A.
SUPV E.B.A.-R.E.
W.O.
PROJ. ENGR.

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER ENGINEERING AND CONSTRUCTION
SUBSTATION GENERAL
BOX MOUNTING DETAILS
FOR STD. DISTRIBUTION SUBSTATION

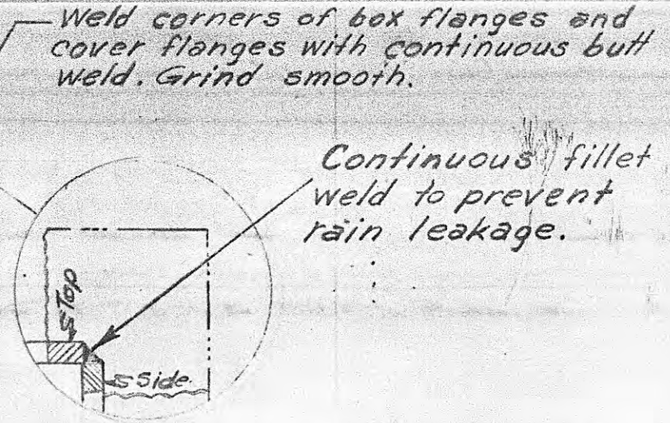
DATE: 2-15-54 | SUBMITTED | APPROVED | SHEET 1 OF 1 SHEETS
SCALE 1"=1" | | | MC-2896

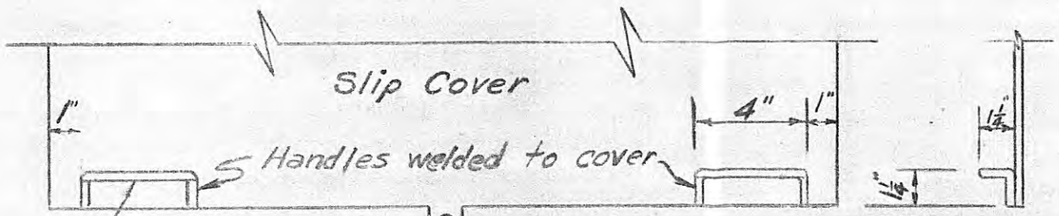


SECT. A-A
Cover In Place



FRONT VIEW
Cover Removed





SECTION B-B

Notes:

1. Box to be fabricated from No. 12 gage sheet steel and galvanized after fabrication.
2. All drilling for conduits to be done in field. See substation conduit drawing for drilling required.
3. The diameter of the roll of the cover flange shall be of such size as to allow the cover to slide freely over the box flanges.

REV. NO.	DATE	DSGN	DRWN	CHKD	SUPV.	APPD
2	1-26-71		BAH	REH	RAT	
	Added Note 3					
1	11-16-61		TME			

Added cover support pin

DSGN ---- SUPV. H22
DRWN H55 W.O. ----
CHKD ---- PROJ. ENGR. ----

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER ENGINEERING AND CONSTRUCTION

SUBSTATIONS GENERAL
SHEET STEEL DISTRIBUTION BOX 24"X24"X10" WITH SLIP COVER

DATE	SUBMITTED	APPROVED	SHEET / OF / SHEETS
8-3-61		2-4-61	MC-40291

SCALE None

R-2

NOTE: Take one turn of grounding wire around saddle bolt or eye bolt at top of pole in Figs. 1, 2, 3 & 4

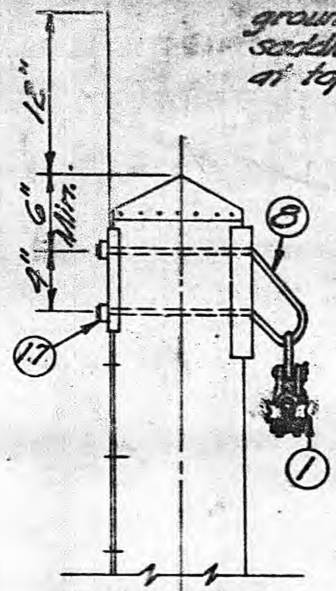


FIGURE 1
GROUND WIRE SUSPENSION

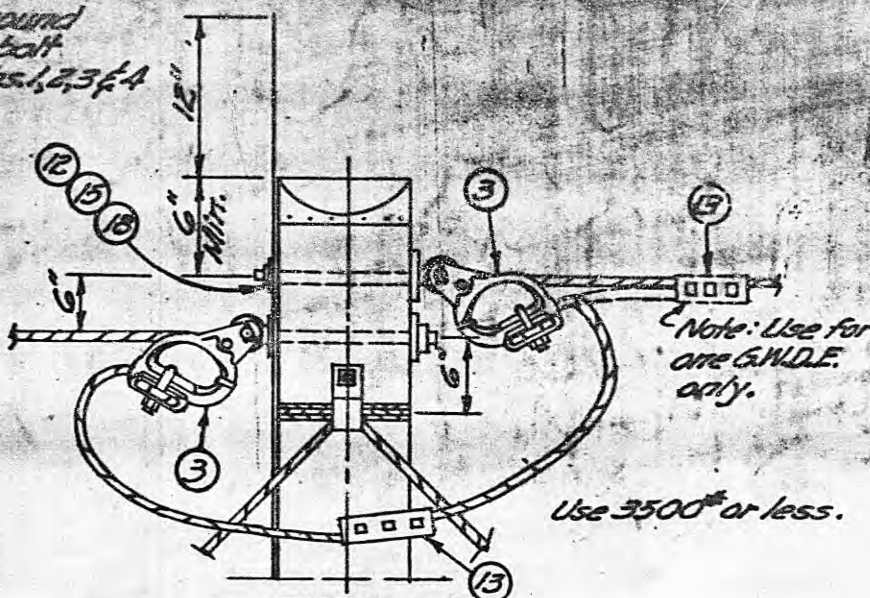


FIGURE 2
GROUND WIRE DEAD END

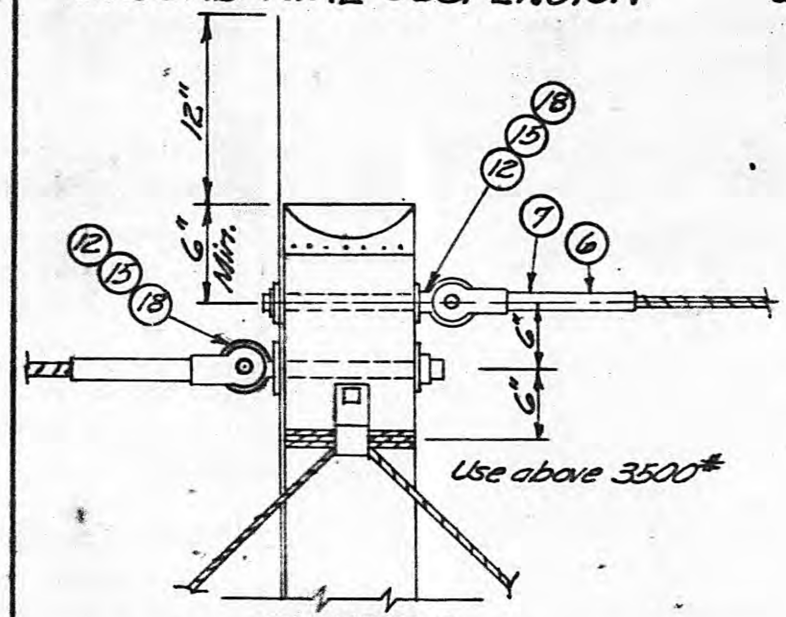


FIGURE 3
GROUND WIRE DEAD END

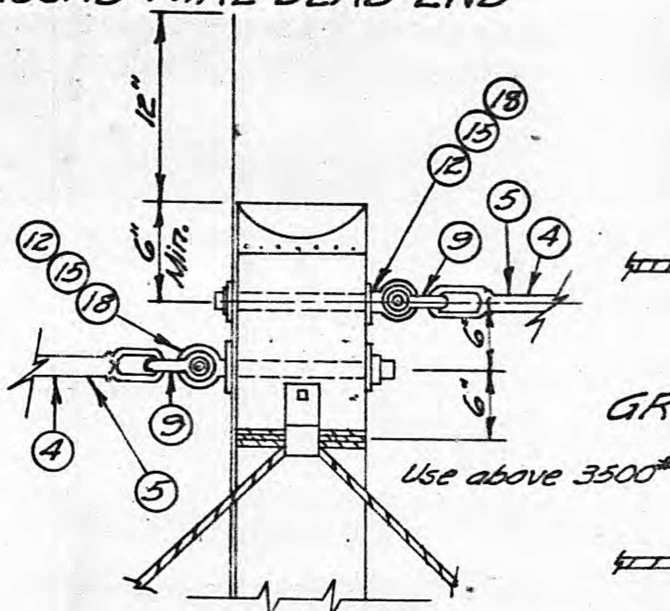


FIGURE 4
GROUND WIRE DEAD END

LIST OF MATERIAL (PER ASSEMBLY)

No. Required: Fig. 11	10	9	8	7	6	5	4	3	2	1	Item	Description	Specs. or Equiv.
1						1				1	1	B.M. Susp. Clamp 3/8" or 7/16" H.S. Steel	BT-6242MI
						1					2	1/2" End Link	54-033 Item 3
	1		1						1		3	Universal Strain Clamp	08-7830
		1		1			1				4	Tubular Compression D.E. for 3/8" H.S. Steel	Alcoa [illegible]
		1		1			1				5	Tubular Compression D.E. for 7/16" H.S. Steel	Alcoa [illegible]
					1			1			6	Compression D.E. 3/8" H.S. Steel	Alcoa 906
					1			1			7	Compression D.E. 7/16" H.S. Steel	Alcoa 908
										1	8	Overhead G.W. Cable Support	54.062
	1	1	1	1	1		1				9	3/4" Shackle (with bolt, nut & cotter)	[illegible]
1						1					10	1/2" Shackle (with cotter pin & key)	[illegible]
			1		1						11	3/4" Connecting Plate	SC-21528
							1	1	1		12	3/4" x 12" Eye Bolt	24.025
	1		1						1		13	6" - 3 Bolt Clamp	54.016
1											14	5/8" x 1 1/2" Tower Bolt 1 1/4" Thread	
							2	2	2		15	2 1/4" x 2 1/4" x 3/16" Washer, 13/16" Ø Hole	54.063
1											16	Eye Nut	J-1092
										2	17	5/8" Palnut	RF-5811
							1	1	1		18	3/4" Palnut	RF-3810

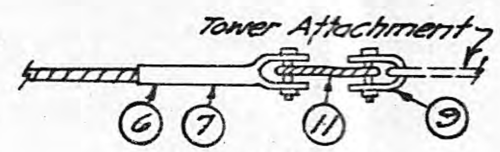


FIGURE 6
GROUND WIRE DEAD END

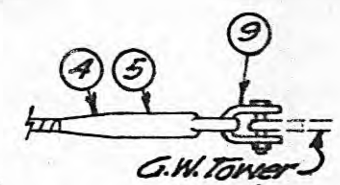


FIGURE 9

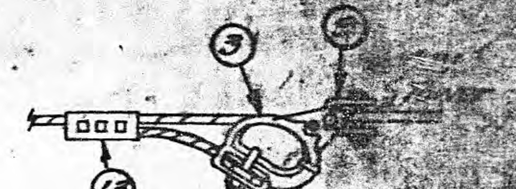


FIGURE 10

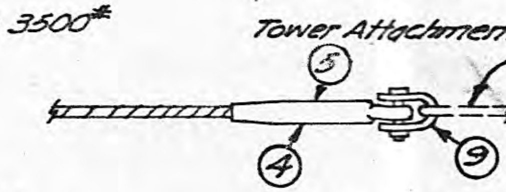


FIGURE 7
GROUND WIRE DEAD END

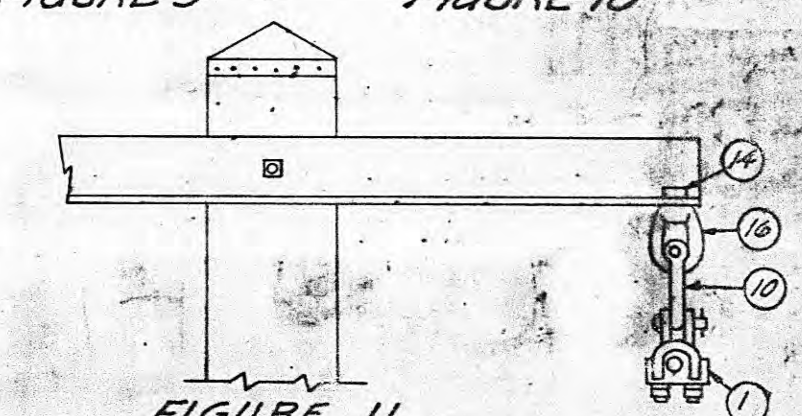


FIGURE 11
GROUND WIRE SUSPENSION

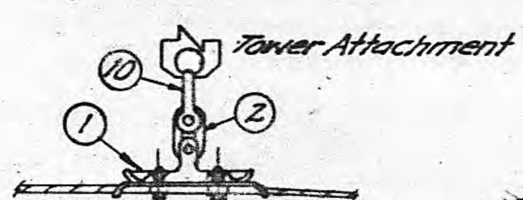
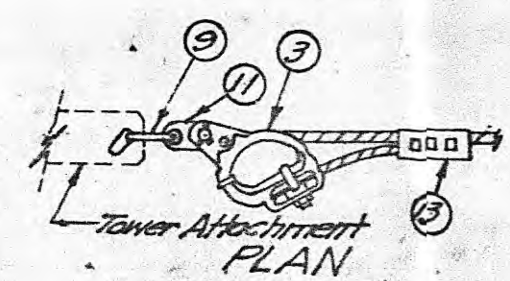


FIGURE 5
GROUND WIRE SUSPENSION



PLAN
FIGURE 8
GROUND WIRE DEAD END

Rev. No.	Date	Dsgn	Drwn	Chkd	Supv.	Subm
22	9/25/73	Removed Computer ID No.		JDB		
21	Added Computer ID No. 5/18/72		DLS	HAE		
	Rev. Figure 11 G.W. Susp.					
20	10-8-70		DLS	HAE	HCJ	
	Rev. Palnut Spec. Numbers					
19	4-20-66		HCJ			
	Removed Guy Clips					
18	1/28/63		CRP		HCJ	
	17-Rev. Items 1 & 2 In Figure 5					
17	3/22/62		CRP		HCJ	ACP
	16-Revised, Redrawn and added Sheet 3					
16	2-3-60		A.N.S.	J.E.B.	HCJ	

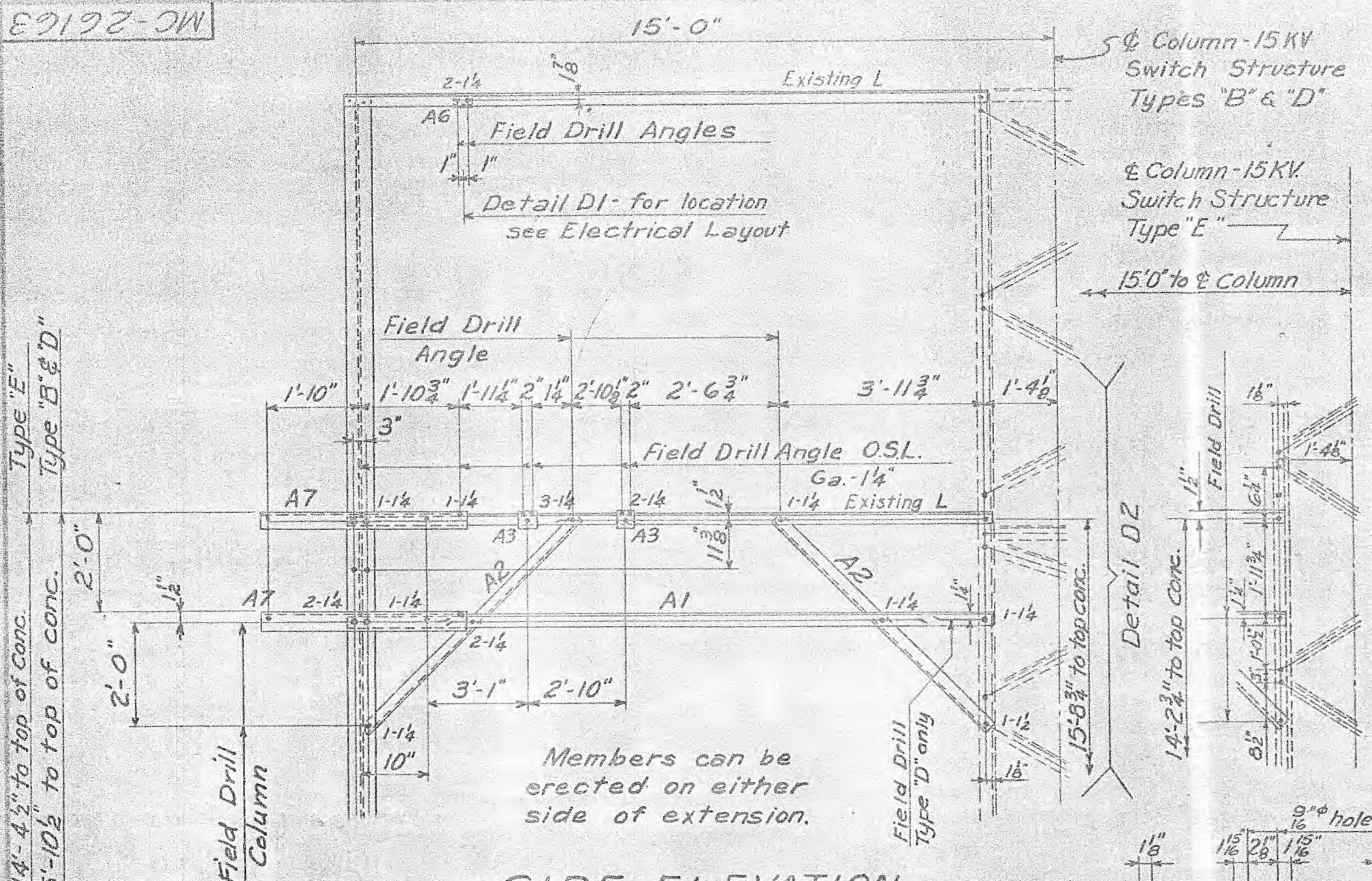
DSGN A.N.S. SUPV HCJ
DRWN A.N.S. W.O.
CHKD J.E.B. PROJ. ENGR. WMM

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER ENGINEERING AND CONSTRUCTION

TRANSMISSION GENERAL
OVERHEAD GROUND WIRE ASSEMBLIES FOR 3/8" AND 7/16" H.S. STEEL

DATE 10-20-53 SUBMITTED R.H. Conwelly APPROVED A.J. [illegible]
SCALE N.T.S. ACP
SHEET 1 OF 3 SHEETS
MC-4528

MC-26163



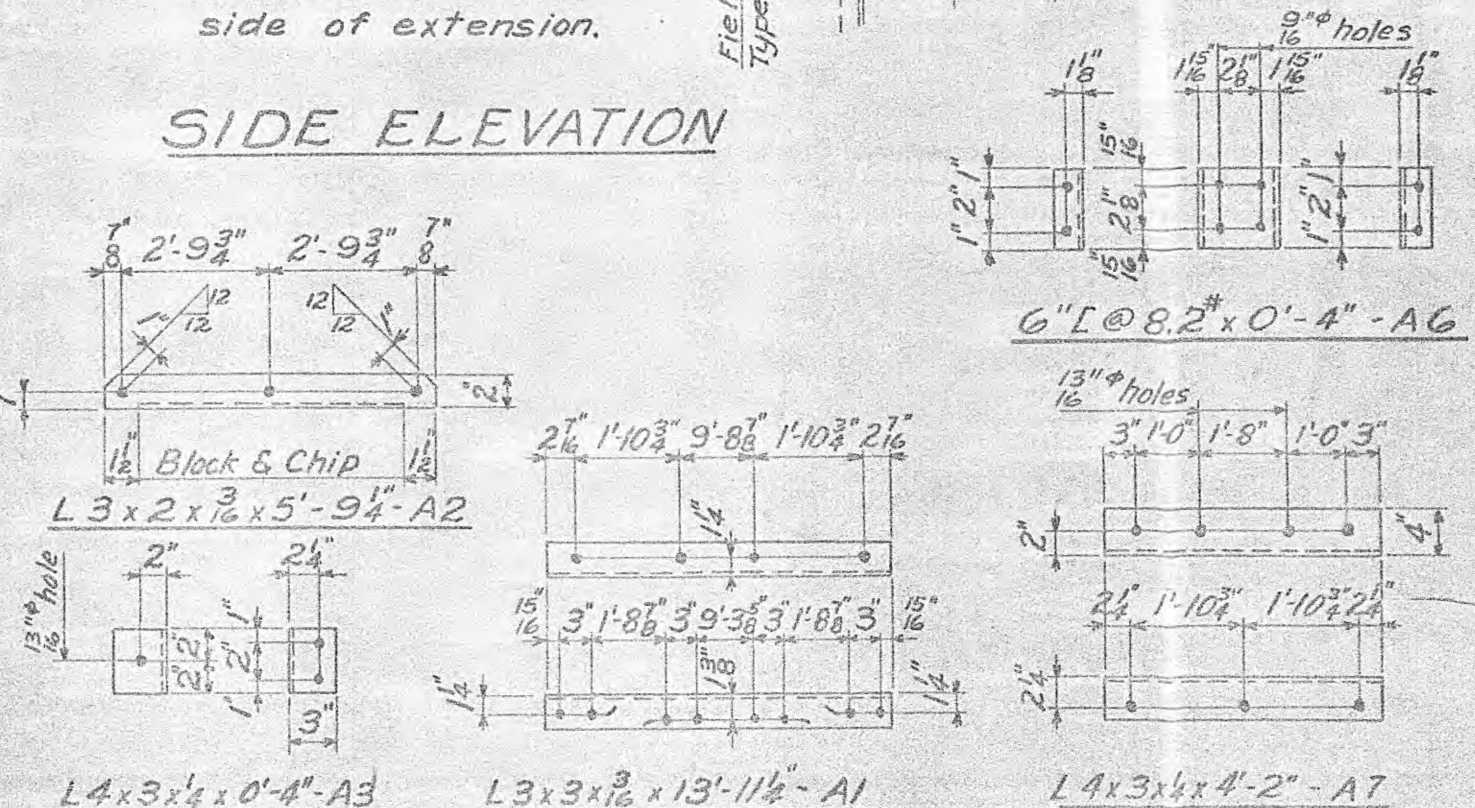
SIDE ELEVATION

BILL OF MATERIAL

No. Req'd Det. D1	No. Req'd Det. D2	Mark	Description	Length Ft	Length In.	Wt. Each
	1	A1	L 3 x 3 x 3/16	13	11¼	53
	2	A2	L 3 x 2 x 3/16	5	9¼	18
	2	A3	L 4 x 3 x ¼	0	4	2
1		A6	6"[@ 8.2#	0	4	3
	2	A7	L 4 x 3 x ¼	4	2	25
5	19		5/8"φ Bolts, sq.hd, hex.nut	0	1¼	0.31
	2		do	0	1½	0.33
Total Weight = 4#	Total Weight = 150#					

NOTES:
All holes 11/16"φ unless noted.
Material to be hot-dip galvanized.
Piece marks to be die-stamped.

REFERENCE:
15 KV. Switch Structure type "E" LC-28294
Regulator Extn. type "E" LC-28295
15 KV Switch Structure, type "B" LC-17485
Regulator Extn. Type "B" LC-17713 & LC-21730 Rev.1
15 KV Switch Structure, type "D" LC-28012
Regulator Extn. Type "D" LC-22617



Rev. No.	Date	Dsgn.	Drwn.	Chkd.	Supv.	Subm.
Added Sheet 3						
6			PF	DL		
Removed pcs. A4 & A5 from Det. D2. Wt. of Det. D2 was 168#						
5	2-16-62		WWFH		WGT	
Added sheet 2						
4	1-8-60		CWT		WET	
Added Type "E" Extension						
3	12-10-53		JKB	a.F.S.	GMW	RFC
Traced; Bolt weights corrected.						
2	8-19-53		RWR	OKC	GMW.	RFC
Added piece A7, A3 was L 3x2x3/16						
1	1-11-52		WSL	CWD		

R.F.C.
WSL
H.W.G.

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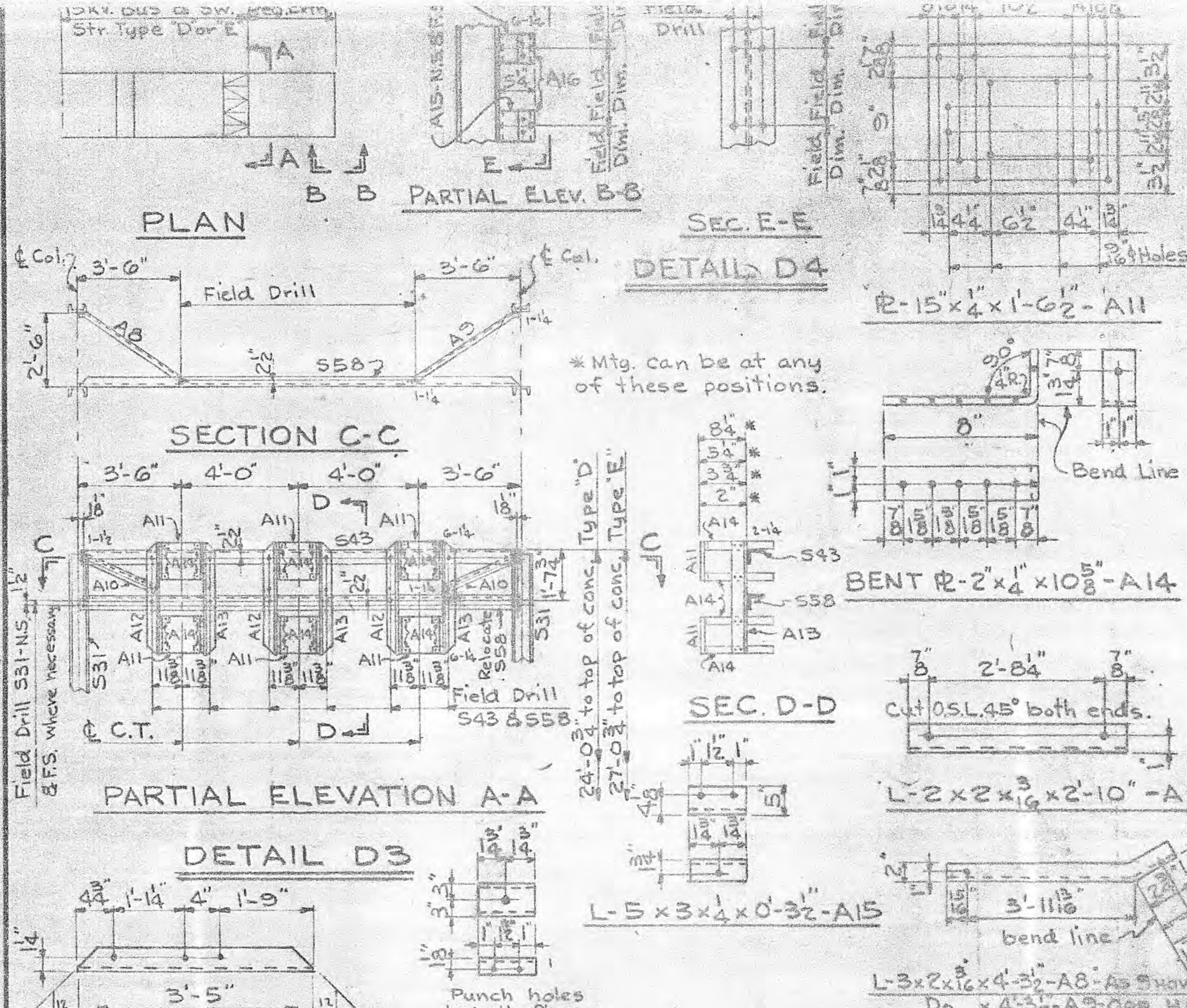
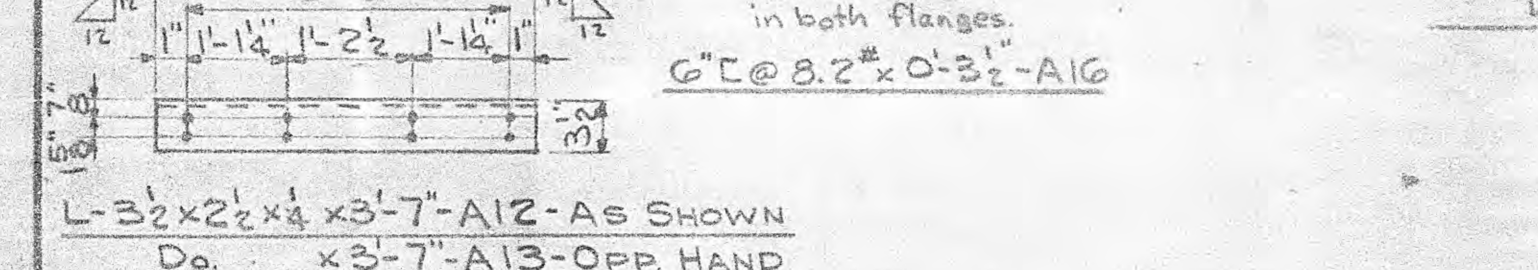
8-4-50 | Scale None | S0010 | Sheet 1 of 2 | MC-26163





BILL OF MATERIAL

NO. REQD DET. D4	NO. REQD DET. D3	MARK	DESCRIPTION	LENGTH FT.	LENGTH IN.	WT. EACH
	1	A8	L-3x2x3/16	4	3 1/2	14
	1	A9	do.	4	3 1/2	14
	2	A10	L-2x2x3/16	2	10	7
	6	A11	PL-15x1/4	1	6 1/2	20
	3	A12	L-3 1/2x2 1/2x1/4	3	7	18
	3	A13	do.	3	7	18
	24	A14	Bent PL-2x1/4	0	10 5/8	2
4		A15	L-5x3x1/4	0	3 1/2	2
2		A16	6"[@8.2#	0	3 1/2	2
13	99		5/8" Bolts,	0	1 1/4	0.31
	3		do.	0	1 1/2	[illegible]
TOTAL WT. = 16#	TOTAL WT. = 350#					

NOTES:

All holes 11/16" unless noted.
Material to be hot dip galvanized after fabrication.
Piece marks to be die stamped before galvanizing.
5/8" sq. hd., hex. nut, std. thd.
B/M includes 10% excess bolts.

REFERENCES:

15 KV. Sw. Str. Type "D" LC-28012
15 KV. Sw. Str. Type "E" LC-28294
Reg. Extn. Type "D" LC-22617
Reg. Extn. Type "E" LC-28295
Typical C.T. outlines ...... X-7951, X-8122, X-8127 & X-8410

REV. NO.		DATE	DSGN	DRWN	CHKD	SUPV.	APPD
1	Redrawn and Added C.T. Mounting and Detail D4.	2-16-62		WHFM	RBJ	WGT	[illegible]

DSGN ______ DRWN W.H.F.M. CHKD RBJ
SUPV. ______ W.O. ______ PROJ. ENGR. ______

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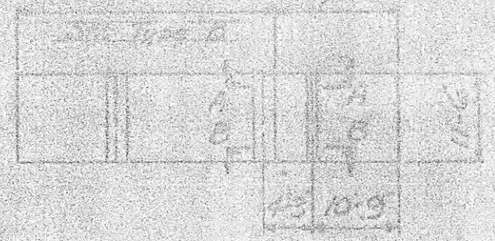
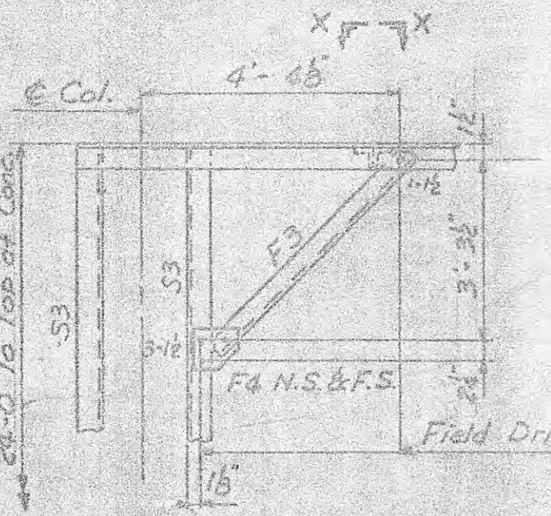
DATE 2-16-62 SUBMITTED 2-23-62 [illegible] APPROVED [illegible]
SCALE N.T.S.
SHEET 2 OF 3 SHEETS
MC-26168

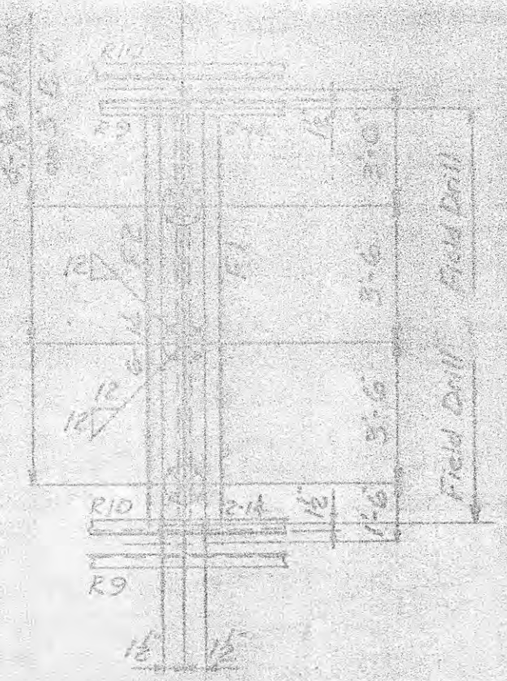
R1



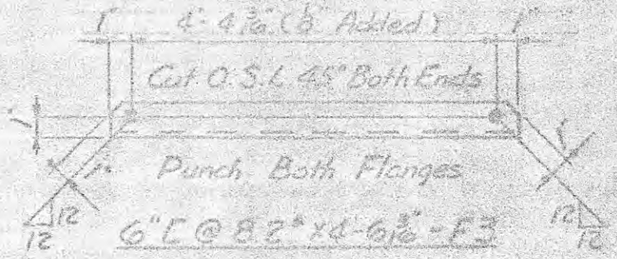
DETAIL D5
KEY PLAN



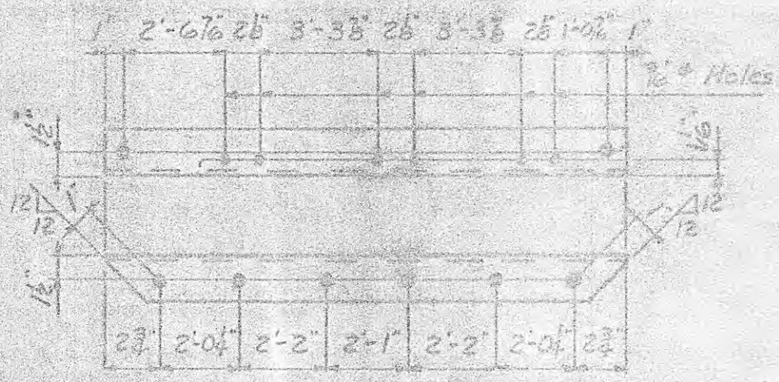
SECTION A-A (As Shown)
SECTION B-B (Opp. Hand)



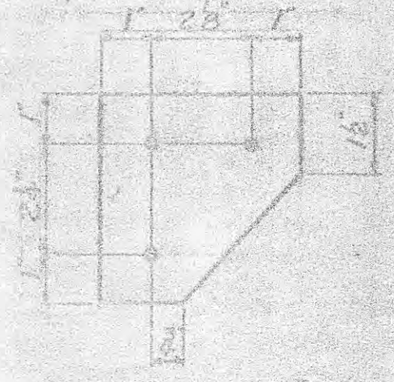
PLAN X-X



6"[@ 8.2# x 4'-6⅜" - F3



L 3 x 3 x ⅜ x 10'-11" - F1 (As Shown)
Do x 10'-11" - F2 (Opp. Hand)



L 4 x 4 x ½ x 0'-4½" - F4

MARKED	SIZE	DESIGNATION	LENGTH Ft.	LENGTH In.	WT.
	1	F1 L 3 x 3 x ⅜	10	11	42
	1	F2 Do	10	11	42
	2	F3 6"[@ 8.2#	4	6⅜	35
	4	F4 L 4 x 4 x ½	0	4½	2
	11	⅞ ϕ Bolts	0	1½	027
	18	Do	0	1½	0285
		Total Wt. = 176 #			

NOTES:
Holes 15/16" unless noted.
Piece marks to be die stamped before galvanizing.
Material to be hot dip galvanized after fabrication.

REFERENCES:
15 KV Sub Str. Type "B" — LC-17485
Reg. Extn Type "B" — LC-21730

REV NO.	DATE	DESIGNED	DRAWN	CHKD	SUPV.	APPD
SECT.	PF	DEPT.	PSHP			
DRAWN	DL	PROJ. ENGR.	WVST			

TENNESSEE VALLEY AUTHORITY
DIVISION OF POWER PLANNING AND ENGINEERING
SUBSTATIONS GENERAL
ADDITIONAL MEMBERS FOR 15 KV REGULATOR EXTENSION-ERECTION DIAGRAM & DETAILS

DATE	SUBMITTED	APPROVED	DRAWING
3-5-69	[illegible]	[illegible]	3 0 2 [illegible]
SCALE N.T.S.	CLASS CODE		WC 2-2[illegible]